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The Australasian Journal of Pharmacy

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February 28, 1957

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Watch this column for further advice
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P. E. COSGRAVE,

Registrar, Pharmacy Board of N.S.W.,
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SYDNEY.

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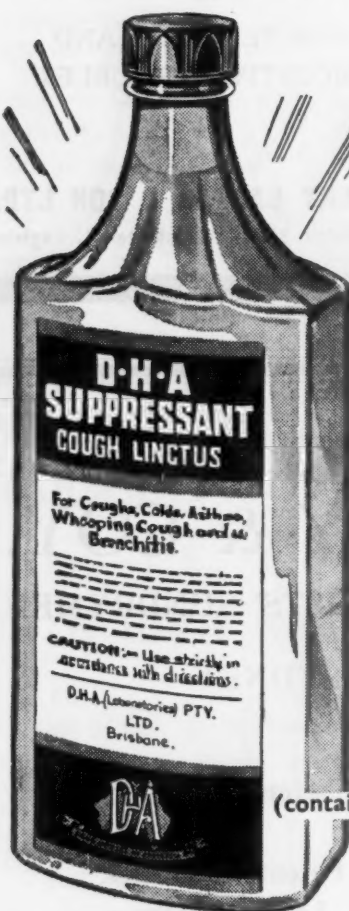
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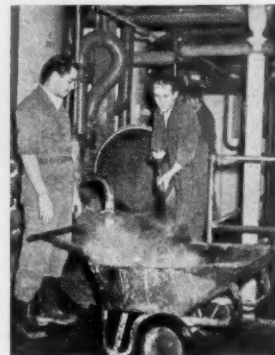
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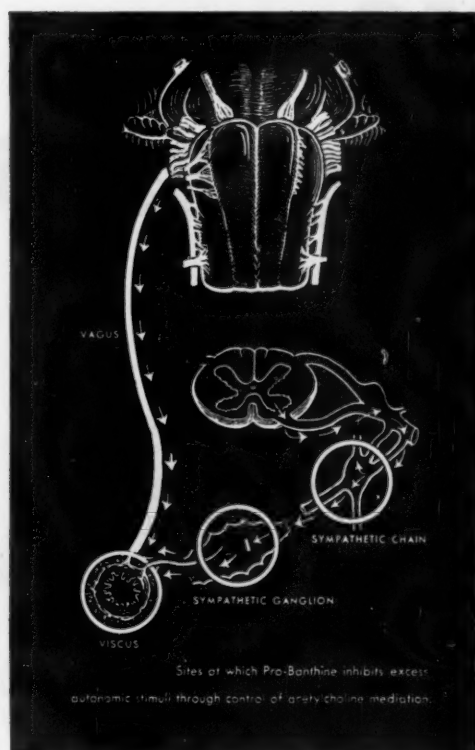
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¹Gastroenterology (1953) 25 : 416.

²Gastroenterology (1953) 25 : 24.

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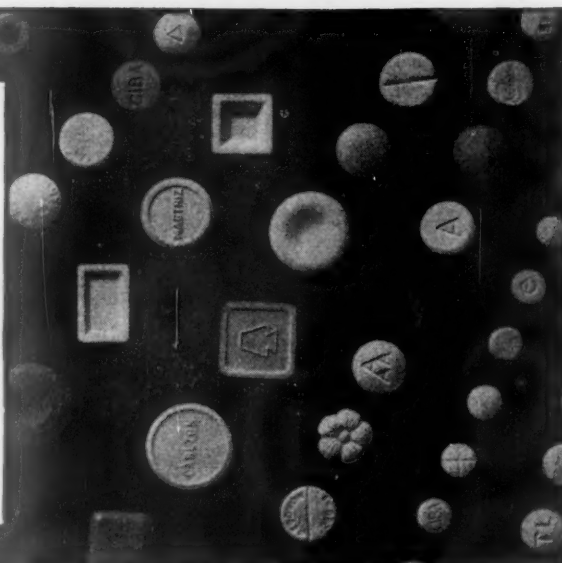
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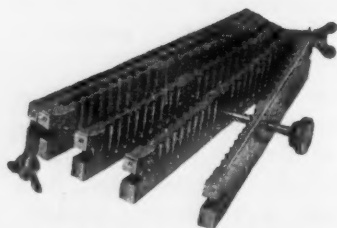
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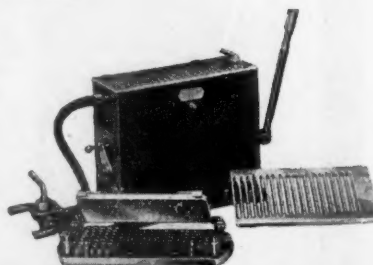
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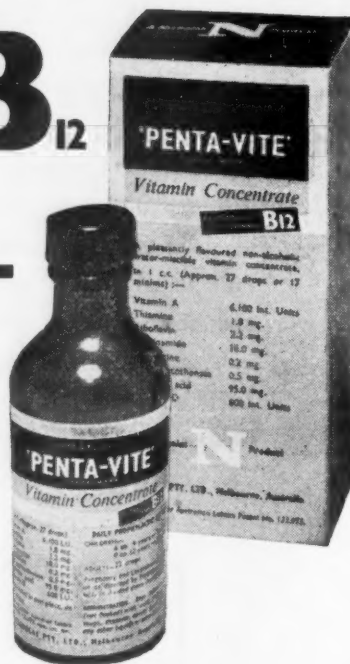
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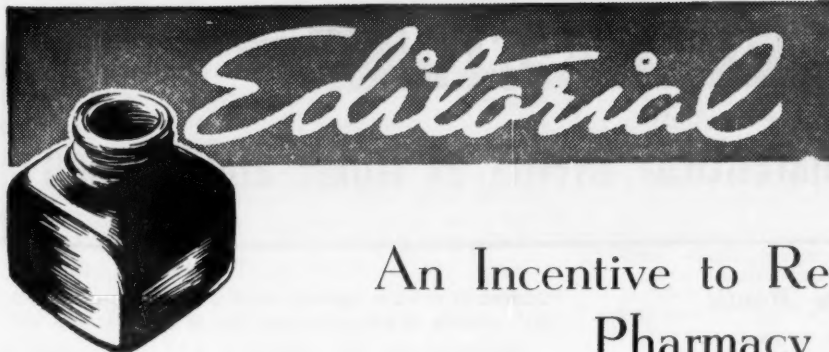
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February 28, 1957

An Incentive to Research in Pharmacy

THE truly generous gift of £20,000 by H. W. Woods Pty. Ltd., announced this month for building a research laboratory in the new College of Pharmacy in Melbourne, should greatly hearten teachers, research workers and the pharmaceutical profession generally.

Australia has lagged behind other countries in the matter of pharmaceutical research, not because of lack of enthusiasm or of enthusiastic workers, but because the necessary money has not been available.

Research in any field must be well organised. Laboratories, equipment, materials and continuous work extending over years are vital.

Individual workers with meagre financial backing have made valuable contributions to pharmaceutical research in teaching institutions, and much has been done by commercial firms; but systematised, regular research programmes in our pharmacy departments and colleges have been restricted for want of money.

The vision and practical gesture of H. W. Woods Pty. Ltd. should give new stimulus to

teachers and workers who know that their function is not complete if formal educational programmes are not reinforced by organised research work.

A research laboratory without a director and workers is like an engine without fuel. It cannot function.

The running of this department therefore poses a problem for the Council of the Melbourne College. It must ensure that this fine gift is put to fullest use, and to do this must inspire confidence in its ability successfully to conduct a research department and then enlist support for maintaining the undertaking.

The pharmaceutical industry is a great and integrated entity. No section can function alone. Manufacturer, wholesale distributor, retailer and hospital pharmacy are all linked in the chain of pharmaceutical service to the community. Their individual interests, though differing in certain respects, are inextricably interwoven and interdependent.

These several sections have co-operated in other matters; why not in this all-important matter of pharmaceutical research?

THE MONTH

News of Pharmaceutical Events at Home and Abroad

Quotation for the Month

*What conscience dictates to be done,
Or warns me not to do,
This teach me more than hell to shun,
That, more than heav'n pursue.*

—Alexander Pope.

A.N.Z.A.A.S.

The Dunedin meeting of the Australian and New Zealand Association for the Advancement of Science is now over, and transcripts of papers and reports of discussions will be published in the Journal as they come to hand.

Distance, unfortunately, precluded as wide a representation of Australian Pharmacy as might have been hoped, but there were representatives from several States of the Commonwealth. Australia did in fact take an important place in the programme. The President of the meeting was Mr. Ron. A. Anderson, of South Australia, whose presidential address has been published.

Reports indicate that Section meetings were well attended, and that enrolment of members in Section "O" was over 80.

The next meeting of A.N.Z.A.A.S. will be held in Adelaide in August, 1958.

Civil Defence

Civil defence at present is very much in the news. This is a field of national service in which Pharmacy would undoubtedly play an important part, if the emergency arises.

In this month's issue is published the first instalment of the winning entry in the S. W. Gayfer Essay competition. The author, a registered pharmaceutical chemist, was an eye-witness of the devastation which followed the dropping of the atomic bombs on Hiroshima and Nagasaki. In the second part of his essay he suggests the part that Pharmacy might play in meeting the tragic situation which would follow atomic attack. All services, including medical services, would be confused and depleted, and every survivor with any form of specialised knowledge would be called into service.

An article on the subject by Alan Brooksbank, a keen

student of defence against chemical and nuclear attack, also appears in this issue and should be read.

Simultaneously, Mr. Alistair I. K. Lloyd, winner of the Kodak Travelling Scholarship No. 3, left Australia to take up the study of his project—An investigation into the potential use of pharmaceutical science and pharmaceutical personnel in relation to Civil Defence. Prior to leaving on this trip Mr. Lloyd attended an indoctrination course conducted by the Federal authorities at Mt. Macedon.

Pharmacy, which is pledged to serve the country in all matters pharmaceutical, must as part of its duty keep within this picture of Civil Defence as it now presents itself.

Portraits in Oils and Other Memorials

Although not quite steeped in antiquity, pharmacy in Australia is growing up.

As a mark of this there are appearing in our halls of learning portraits in oils and other memorials of men who have served the profession nobly.

The name of A. W. McGibbony, virtual founder of the Guild, is perpetuated by a bronze plaque in the Federal Headquarters of the Guild in Melbourne, a fitting place for acknowledgment of self-sacrificing pioneering work in pharmaceutical organisations.

In South Australia portraits in oils of Professor A. Killen Macbeth and E. F. Lipsham, leaders in pharmaceutical education in that State for many years, will hang in appropriate settings.

In Victoria a portrait of Dean Sissons, a name revered among his students, adorns the museum of the Victorian College of Pharmacy and will find a place of honour in the new building when it is erected.

During the month an offer of a portrait of Dr. Byron L. Stanton, another stalwart of pharmaceutical education in Victoria and friend of Pharmacy, was made by Henry Francis & Co., and accepted by the Council of the College.

It is good that recognition such as this should be made during the lifetime of those to be honoured. Their labours were not given with a hope of reward. Their compensation is the betterment of the profession resulting from their efforts. For them there could be no more satisfying reward than the realisation of the ideals which actuated them, and no better method of keeping those ideals before their successors could be found.

A Magnificent Gift for Research

H. W. Woods & Co. Pty. Ltd. has offered a gift of £20,000 to the Pharmaceutical Society of Victoria for the building of a research laboratory for the proposed new College of Pharmacy at Parkville.

This is the largest single contribution ever made for research in this country. It could well be the key to a new era in research in Australian pharmaceutical teaching institutions and be productive of much useful work.

Pharmaceutical chemists, teachers and research workers, not only in Victoria but in all other parts of the Commonwealth, should unanimously join in commendation of this very fine contribution and appreciation of the vision behind the gesture.

Samples of Restricted Drugs

Every month produces some example of undesirable and indiscriminate sampling of potentially harmful preparations through the post.

In the most recent issue of "The Medical Journal of Australia" Dr. Gwen Fong complains that she received recently her weekly unwanted sample in an unsealed envelope. This sample was of amphetamine sulphate.

The doctor's complaint is that as she has three small children who often bring in the mail she finds the receipt of such samples exasperating and alarming. She asks if the B.M.A. could not bring pressure to bear on drug houses to stop this dangerous practice.

This is a problem which has concerned chemists for a considerable time also, and it would appear urgently necessary that some joint move should be taken to control the situation which is now out of hand.

PLANS TO ERADICATE MALARIA

Experiments conducted at the Ross Institute of Tropical Hygiene in London have shown that resistance to insecticides in mosquitoes is inherited according to Mendelian laws. Professor George Macdonald, director of the Institute, told a World Health Organisation malaria conference held recently in Athens that mosquitoes' resistance to modern insecticides "doesn't seem as tragic as it did in 1951, when the first news of this phenomenon was received from Greece." He thought it would be "very bad luck indeed" if, with our present knowledge and the means at our disposal, we were not able to eradicate malaria within the next few years.

In Southern Europe, from Spain to Bulgaria, there were about four million cases a year before the introduction of DDT spraying at the end of the war. Now the figure is estimated at 10,000. In Eastern Mediterranean countries the number of people who regularly suffer attacks has been reduced from about 40 million to about 14 million. In Greece, which before the war had between one and two million cases of malaria every year, there were only 408 cases in 1952. In Italy cases of malaria have dropped from about 400,000 in 1945 to three new cases of local origin last year. Under the leadership of the World Health Organisation, malaria-control campaigns are now being converted into all-out attempts to eradicate the disease.—*The Alchemist*, September, 1956.

BIOLOGY CHEMISTRY PHARMACY

Comments from Butler University College of Pharmacy

About 30 years ago, at the height of this movement, a representative of the American Institute of Architects made some cogent observations on professions generally. The burden of his remarks was to the effect that any profession must go through various stages of "liberation from selfishness." Of course, this is a basic meaning of a Code of Ethics—it always prescribes (among other things) the duties of the members of a group toward those outside the group—it proclaims release from selfishness. Furthermore, codes based upon function, i.e., professional codes, can and do bring to the general community a continuous and creative reinforcement of standards.

Five stages of liberation from selfishness have been recognised by the writer referred to. These stages often overlap to a great extent. They are summarised and briefly commented upon here, that the Hoosier pharmacists may have an opportunity for reflection upon these very true and important observations.

The first stage in the liberation from selfishness is the effort of the profession to protect its members from unfair competition, and to improve the profession in public esteem. We should remember that confidence must be enjoyed in order to render a full measure of service. In one form or another, this principle has been incorporated in every code since Hammurabi (ca. 2200 B.C.).

The second step in the liberation from selfishness occurs when the members of a group begin to consider the importance of their relation to each other. Thus, every code of a profession dwells on the duties and obligations of its members "to each other and to the profession at large." This is the stage most frequently noted by the public because its meaning is often misinterpreted, even by members of the profession. It is the supposed excuse for allowing professional "etiquette" or courtesy to assume the place of professional obligation. There is a difference! However, the point is that this is a stage in the development of a profession, albeit one frequently hampered by man's imperfections.

The third stage in the process of liberation from selfishness comes with the effort to prevent outside interference with the profession. This stage, too, has been implied in the earliest professional codes. Those with little understanding often consider this a selfish form of activity (even Indiana legislators). We in our health service profession know that just the opposite is the case.

The fourth step is the effort to improve standards of admission to practice in the profession. The Hippocratic Oath and Law were both designed, in part, for this purpose. Modern codes leave such matters to the activity of professional societies, except to remind the members that certain personal qualities as morality, studiousness and similar characteristics must be evident in the actions of the would-be practitioners.

The fifth stage noted was described by this architect as "... the stage in which permanent importance is given to the relationship of the profession to the service which it may be expected to render" ... that is to say the stage where public needs are placed paramount to professional rights or even desires. This is a goal, possibly one not to be achieved 100 per cent. for a very long time. Nonetheless, it is a good goal, an ideal quite properly placed at the top of the steps, and one which is a primary distinction between the professional man and the tradesman.

—Extract from an article by K. L. Kaufman, published in "The Indiana Pharmacist."

SCIENCE SECTION



EDITED BY A. T. S. SISSONS, B.Sc. F.P.S.

ARTICLES

- Aluminium Hydroxide as an Emulgent.
- Solubility of Crystal Violet in Various Solvents.
- Epilepsy and Anticonvulsant Drugs.
- Trial of Meprobamate.
- Promethazine for Pin-Worm Infestation.
- New Atomic Energy Reactor: Harwell, England.
- The Next B.P.
- U.S. Has New Goal for Polio Research.
- Charles Singer, Medical Historian.
- Drug Therapy in Hypertension.

A.N.Z.A.A.S. DUNEDIN MEETING, 1957

Section "O"—Pharmaceutical Science Papers

(Continued)

ALUMINIUM HYDROXIDE AS AN EMULGENT

By R. A. Anderson

1. The "Inactivation" of Aluminium Hydroxide by Heat

In 1940 Hopkins (1) described "a New Emulsifying Agent" which had become available in commerce as "Unemul," and which was a paste containing specially treated aluminium hydroxide, equivalent to approximately 10 per cent. of aluminium oxide (about 15 per cent. $\text{Al}(\text{OH})_3$). The use of boiling and exposure to ultra-violet light were mentioned as effective ways of "ripening" a suspension of aluminium hydroxide so that it becomes "quite insoluble in ordinary alkalis and acids."

In a later paper Swallow and Whittet (2) have described the same commercial preparation as a "white jelly containing about 10 per cent. of activated colloidal aluminium hydroxide. It is chemically and physiologically inert." The term "activated" was used in both of these papers to indicate an increased emulsifying power; I will use the term "inactivated" for these changes, because this part of the paper is more concerned with reduced solubility in acids, i.e. a "physiological inertness."

The changes which occur when aluminium hydroxide is heated are usually explained as being due to loss of water from the hydroxide groups with formation of a much larger molecule. This paper describes an investigation into these changes with a view to ascertaining the suitability of the products for use as emulgents.

Preparation of Samples

Dried Aluminium Hydroxide Gel B.P.C. was heated under the following conditions:—

- (a) at 45 deg. C. for 130 hours.
- (b) at 150 deg. C. for 2 hours.
- (c) at 150 deg. C. for 6 hours.
- (d) at 200 deg. C. for 6 hours.

A sample of aluminium hydroxide gel was prepared according to the method of the A.P.F. After washing free of sulphate it was collected on calico spread over a domestic wire strainer and allowed to drain until the weight indicated a gel containing about 15 per cent. w/w $\text{Al}(\text{OH})_3$; this gel was assayed and found to contain 15.5 per cent. w/w ($\text{Al}(\text{OH})_3$ (equivalent to 10.1 per cent. w/w Al_2O_3). This gel was steamed or autoclaved as follows:

- (a) at 100 deg. C. for 3 hours.
- (b) at 100 deg. C. for 6 hours.
- (c) at 115 deg. C. for 3 hours.

It was also diluted to 5 per cent. Al_2O_3 and autoclaved at 115 deg. C. for three hours.

After heating at 100 or 115 deg. C. all gels became firmer in consistence and the 10 per cent. gels became to some extent granular. They did not become more concentrated.

Some of the 10 per cent. sample was further concentrated by squeezing in calico to about 20 per cent. Al_2O_3 (assayed 18.7 per cent. Al_2O_3). This was stored at 45 deg. C. for 61 days; it became hard and crumbly (a sample stored in a refrigerator for the same period remained firm but soft).

Procedure Used to Test Degree of Inactivation

It was found that two samples of "Unemul" which were tested could be dissolved completely in N/1 acid by the use of heat, so that it is not chemically inert as reported by Swallow and Whittet (2).^{*} It was decided therefore to compare samples under conditions which correspond to those of the stomach and so ascertain to what extent they were "physiologically inert."

^{*}Footnote: Indeed it was possible to determine the amount of aluminium in these pastes by dissolving in standard acid and back-titrating to pH 3.4 as described later. Samples were found to contain about 10 per cent. w/w Al_2O_3 , which supports the statement of Hopkins and is contrary to that made by Swallow and Whittet.

The method used was roughly comparable with the test for Neutralising Capacity described in the B.P.C. An amount of the sample equivalent to about 0.1 gramme of Al_2O_3 was added to 200 ml. N/20 sulphuric acid which had been previously warmed to 37 deg. C. Lumps of paste were broken up by stirring and the mixtures were maintained at 37 deg. C. with frequent (but not continuous) stirring for three hours (unless otherwise stated) after which they were immediately titrated with N/2 NaOH to pH 3.4. The titration was begun in the presence of solution of methyl orange and, after the first colour change, was spotted on to B.D.H. narrow range indicator paper until pH 3.4 was reached.

The influence of time on solution of commercial "Unemul" in N/20 acid was investigated: the results are shown in Table I.

TABLE I
RATE OF SOLUTION OF "UNEMUL"
in N/20 Sulphuric Acid at 37 deg. C.

Time of Incubation	Proportion of total aluminium* which dissolved
75 minutes	6.6 per cent.
3 hours	10.3 per cent.
18 hours	20.5 per cent.

The samples under test were incubated for 3 hours. The results are shown in Table II. There were slight variations in repeated estimations of the same sample which were probably due to variations in the rate and time of stirring, and for this reason a range in which the estimations fell is given in the table.

TABLE II
Proportion of Total Aluminium which dissolves in N/20 Sulphuric Acid in 3 hours at 37 deg. C.

Sample	Proportion which dissolves
Unemul (sample A)	9-11%
Unemul (sample B)	7-8%
20% Alum. Hydrox. Gel. stored 45 deg. C. 61 days	25%
20% Alum. Hydrox. Gel. stored re-frig. 61 days	all
10% Alum. Hydrox. Gel. heated 100 deg. C./3 hours	20-21%
10% Alum. Hydrox. Gel. heated 100 deg. C./6 hours	11%
10% Alum. Hydrox. Gel. heated 115 deg. C./3 hours	8-11%
5% Alum. Hydrox. Gel. heated 100 deg. C./6 hours	12%
Dried Alum. Hydrox. Gel. B.P.C.	all
Dried Gel. heated 45 deg. C./130 hours	86%
Dried Gel. heated 150 deg. C./2 hours	11%
Dried Gel. heated 150 deg. C./6 hours	9%
Dried Gel. heated 200 deg. C./6 hours	31-34%

Discussion

Although the solubility of aluminium hydroxide gels in acids can be reduced, attempts to make them chemically inert have failed. More important from a pharmaceutical point of view are the rates of solution in

- acids about the pH of gastric secretion, and
- acids likely to be prescribed in preparations for which "Unemul" is a likely emulgent.

The latter problem has not yet been investigated.

* Footnote: Total aluminium was determined by complete solution in standard acid and back-titration to pH 3.4.

The arbitrary choice of incubation with N/20 acid for 3 hours may be criticised, on the grounds that the pH of gastric secretion varies markedly between different persons and that the emptying time of the stomach varies with different individuals and at different times in the same individual. In 1945, Toal (3) investigated the suitability of powdered "aluminium hydroxide in the treatment of hyperacidity" and treated the powders with N/10 acid for one hour. For our purpose it seemed reasonable to choose an average acid strength (N/20 is used by the B.P.C. in the test for neutralising capacity) and a "near maximum" time. Potentially soluble aluminium hydroxide is probably not contra-indicated for people who secrete acid stronger than that equivalent to N/20. It should also be recognised that in most cases only small amounts of these gels are used, and the amount of gastric secretion which would be neutralised is very small even if, say, 20 per cent. of the total aluminium hydroxide dissolved.

According to Haynes (4), gels of aluminium "hydroxide" prepared by adding a solution of an aluminium salt to a solution of sodium carbonate (A.P.F. method) contain more carbon dioxide and retain solubility in acid better than those made by the reverse order of mixing. This has not been investigated. If Haynes' conclusions are correct, gels prepared by adding the alkali to the aluminium salt would become even less soluble in acid than those prepared here.

The results in Table II confirm that aluminium hydroxide is inactivated by heat and that the rate of inactivation increases as the temperature is raised. The greater solubility of the dried gel heated at 200 deg. C. as compared with that heated at 150 deg. C. is an exception to the general finding. At first, it was thought to be due to some conversion to the more readily soluble oxide. However, ignition of a sample at 600-800 deg. C. for an hour gave a product which was less soluble, about 10 per cent. dissolving in N/20 acid in three hours. This aspect requires further investigation.

None of the samples under test (listed in Table II) were completely insoluble, and so none can be considered to be "physiologically inert." Comparison with "Unemul" seems to be a reasonable basis for evaluation of other samples. On this basis, pastes which have been heated at 100 deg. C. for six hours or at 115 deg. C. for three hours, and dried gels heated at 150 deg. C. for from 2-6 hours appear to be relatively inert.

Heating a 10 per cent. gel to 115 deg. C. for three hours in an autoclave is perhaps more convenient than heating it for six hours at 100 deg. C., so this product will be investigated for emulsifying properties. The use of the dried gels would often be more convenient in practice than the 10 per cent. paste, and so these also will be tested pharmaceutically.

Ultra-violet light which was stated by Hopkins (1) to be an effective means of "ripening" aluminium hydroxide would not seem to be convenient for small scale manufacture and has not been investigated.

Summary

1. Preparations containing aluminium hydroxide in various forms were prepared and subjected to various degrees of heat treatment.

2. The solubility of these samples in acid about the strength of the gastric secretion was determined, with a view to evaluating the degree of "physiological inertness."

ALUMINIUM HYDROXIDE AS AN EMULGENT

II. The effect of heat on the emulsifying properties of some preparations of aluminium hydroxide.

This section of the paper was designed to investigate whether heating aluminium hydroxide improved the emulsifying properties and to determine whether the gels should be heated before concentration as implied by Hopkins (1).

Procedure

Emulsions were prepared using the following agents:
(a) and (b) "Unemul"; the two different samples used in Part I of this investigation.

(c) Dried Aluminium Hydroxide Gel B.P.C. containing the equivalent of 50 per cent. Al_2O_3 .

(d) This Dried Gel which had been heated at 150 deg. C. for six hours; water was lost on heating and finally it contained the equivalent of 78 per cent. Al_2O_3 .

(e) An extemporaneously prepared gel containing the equivalent of 10 per cent. w/w Al_2O_3 autoclaved at 115 deg. C. for three hours.

(f) Aluminium Hydroxide Gel A.P.F. which was adjusted to contain the equivalent of 4 per cent. w/w Al_2O_3 .

(g) This A.P.F. Gel which had been autoclaved at 115 deg. C. for three hours.

(h) An extemporaneously prepared gel containing the equivalent of 1 per cent. w/w Al_2O_3 autoclaved at 115 deg. C. for three hours.

Emulsion Formula I

Liquid Paraffin (tinted red with about 0.01 per cent. Sudan 111) 50
Preparation of Aluminium Hydroxide in amount equivalent to 0.5 Al_2O_3
Water to 100

Method: The emulgent was dispersed through the water, and this suspension was shaken with the paraffin in an oversize bottle. Half of each emulsion was passed through a hand homogeniser.

The stability on storage is shown in Table I. All emulsions were very viscous, and a series of weaker emulsions was made to Formula II.

TABLE I

Emulgent and Procedure used to prepare Formula I		Stability of product at 20-22 deg. C.	
		after 10 minutes	after 18 hours
(a) "Unemul" sample (a)	Shaken in bottle homogenised	5	7
(b) "Unemul" sample (b)	Shaken in bottle homogenised	2	2
(c) Dried Alum. Hydrox. Gel. B.P.C.	Shaken in bottle homogenised	5	7
(d) Dried Gel. heated 150 deg. C./6 hrs.	Shaken in bottle homogenised	2	2
(e) 10% Extemp. Gel. heated 115 deg. C./3 hrs.	Shaken in bottle homogenised	8	8
(f) 4% A.P.F. Gel. freshly made	Shaken in bottle homogenised	7	7
(g) 4% A.P.F. Gel. heated 115 deg. C./3 hrs.	Shaken in bottle homogenised	6	7
(h) 1% Extemp. Gel. heated 115 deg. C./3 hrs.	Shaken in bottle homogenised	5	5
		5	10
		4	4

Code: 1. homogeneous
2. slightly creamed
3. creamed
4. coarse emulsion—not creamed
5. coarse emulsion—slightly creamed
6. coarse emulsion—creamied
7. small globules of oil visible

Emulsion Formula II

Liquid Paraffin (tinted red with about 0.01 per cent. Sudan 111) 25
Preparation of Aluminium Hydroxide in amount equivalent to 0.25 Al_2O_3
Water to 100

Two methods of preparation were used:

Method A: As for Formula I with final homogenisation. It was found that at the lower strengths the temporary emulsion formed on shaking settled out very quickly whilst homogenisation was in progress. It was necessary to pass the preparations through the machine four times. For this reason, the more satisfactory procedure outlined in Method B was also used. (Under most circumstances, stability would probably be improved by increasing the viscosity of the continuous phase.)

Method B: The emulgent was dispersed through 25 parts of water, and this suspension was shaken with the paraffin in an oversize bottle. This temporary emulsion was homogenised, then diluted to volume and again passed through the homogeniser.

The stability of preparations made by both of these methods is set out in Table II.

Size-frequency analyses were not carried out because the globule size would vary with the efficiency of homogenisation: (A.Q.P. Emulsifier, described by Cooper and Gunn (5) was used in these experiments, and reduction in globule size is to some extent dependent on the speed with which the handle is moved.) The ranges into which the sizes of most of the globules fell is recorded in Table II opposite those preparations where it may be of interest.

TABLE II

Emulgent and method used to prepare Formula II		Stability of product at 20-22 deg. C.		Size of majority of globules in microns
		after 10 mins.	after 3 hrs.	
(a) Unemul" sample (a)	Method A B	2 2	3 3	5-15-30 5-15-30
(b) "Unemul" sample (b)	Method A B*	2 1	3 3	15-30-50 3-5-30
(c) Dried Alum. Hydrox. Gel. B.P.C.	Method A* B*	10 10	— —	
(d) Dried Gel. heated 150 deg. C./6 hrs.	Method A* B*	7 3	7 7	
(e) 10% Extemp. Gel. heated 115 deg. C./3 hrs.	Method A B	2 1	2 3	5-15-50 3-10-60
(f) 4% A.P.F. Gel. freshly made	Method A B	7 7	7 7	
(g) 4% A.P.F. Gel. heated 115 deg. C./3 hrs.	Method A* B*	2 1	3 3	20-50-80 15-50-80
(h) 1% Extemp. Gel. heated 115 deg. C./3 hrs.	Method A B	2 2	2 2	5-20-50 3-5-10-30

8. large globules of oil visible
9. very large globules of oil visible not completely coalesced
10. cracked.

* The preparations marked with an asterisk were more red in colour than the rest which were pink.

Discussion

Although variation in the efficiency of homogenisation must be recognised in assessing the relative merits of the various preparations of aluminium hydroxide, certain deductions can be made with a fair degree of certainty.

Freshly made aluminium hydroxide is a relatively unsatisfactory emulgent. Comparison of (c) with (d) and (f) with (g) indicates clearly that heating increased the emulsifying activity. The dried gels, either as B.P.C. or after heating to reduce solubility, are also relatively unsatisfactory.

The stability of preparations made with gels (e), (g) and (h) shows that there is no advantage in heating the dilute aluminium hydroxide before concentration. It would almost always be more convenient to concentrate it before heating. The product is more granular than the commercial paste, but it gives a smooth product when dispensed in water with a pestle and mortar.

The colour of most of the preparations was a uniform pink, but in a few cases the emulsions were more nearly red in colour. That this is an indication of increased globular size would be expected and is supported by the sizes shown in Table II.

Summary

1. Liquid paraffin was emulsified by using variously treated samples of aluminium hydroxide.

2. Aluminium hydroxide which has been subjected to heat is a more effective emulgent than one in which substantially all of the aluminium is present as in $Al(OH)_3$.

3. Dried gels are relatively unsatisfactory.

4. A 15.5 per cent. aluminium hydroxide gel (equiv. 10.1 per cent. Al_2O_3) after heating at 115 deg. C. for three hours emulsifies liquid paraffin as well as "Unemul."

ALUMINIUM HYDROXIDE AS AN EMULGENT

III. An evaluation of the usefulness of two extemporaneously prepared gels.

Hopkins (1) listed the more important characteristics of an ideal emulsifying agent as follows:

"1. It must be capable of forming true and permanent emulsions.

2. It should withstand the action of electrolytes and other factors that tend to crack emulsions.

3. The amounts required should be small.

4. It must be suitable for internal use.

5. It should be resistant to the attacks of moulds and bacteria."

He further stated that Unemul "fills, both physically and chemically, most of the above requirements."

It has been shown in the first part of this paper that emulcents of this type are not so inert as was originally believed, but under many circumstances this would not contra-indicate their use.

In hot climates their resistance to attack by moulds and bacteria is a particularly useful property. Other advantages over more commonly used emulsifying and suspending agents have been described and indicate a wide variety of uses.

Part II of this paper suggested that a 10 per cent. extemporaneous gel heated at 115 deg. C. for three hours was an emulsifying agent at least as effective as "Unemul" for paraffin emulsions. It seemed desirable to extend the study to investigate some other uses of this type of agent. Consideration has been restricted to a comparison with "Unemul" of

(a) the heated 10 per cent. gel, and,

(b) the dried gel of the B.P.C. heated to 150 deg. C. for six hours.

TABLE

Formula and time of storage		Stability using		
		"Unemul"	10% Extemp. Gel. heated 115° C./3 hours	Dried Gel. heated 150° C./6 hours
Formula I:	after 10 mins.	Creamed (95)	Creamed (98)	Creamed (90) (Droplets visible)
(paraffin)	" 3 hrs.	" (60)	" (80)	" (50) curdy)
"	" 20 hrs.	" (50)	" (75)	No change
Formula II:	" 10 mins.	Creamed (90)	Creamed (98)	Cracked
(paraffin and oleic acid)	" 3 hrs.	No change	" (70)	—
"	" 20 hrs.	Cracked	No change	—
Formula III:	" 10 mins.	Homogeneous	Homogeneous	Not creamed, but small droplets visible
(paraffin and alcohol)	" 3 hrs.	Creamed (85)	Creamed (95)	Creamed (95)
"	" 20 hrs.	" (65)	" (75)	" (70)
"	" 7 days	" (50)	" (70)	" (50)
Formula IV:	" 10 mins.	Homogeneous	Homogeneous	Creamed (85) Curdy
(arachis oil)	" 3 hrs.	Creamed (90)	Creamed (90)	" (80)
"	" 20 hrs.	" (70)	" (80)	" (75)
Formula V:	" 10 mins.	Homogeneous	Homogeneous	Creamed (90) Curdy
(castor oil)	" 3 hrs.	Creamed (90)	Creamed (90)	" (80)
"	" 20 hrs.	" (80)	" (80)	" (75)
Formula VI:	" 10 mins.	Homogeneous	Homogeneous	Homogeneous
(paraldehyde)	" 3 hrs.	Creamed (98)	Creamed (98)	Creamed (90)
"	" 20 hrs.	" (60)	" (90)	" (40)
Formula VII:	" 10 mins.	Homogeneous	Homogeneous	Creamed (90) Curdy
(eucalyptus oil)	" 3 hrs.	"	Creamed (98)	" (60)
"	" 20 hrs.	Creamed (95)	" (90)	No change
"	" 7 days	" (75)	" (70)	" "
Formula VIII:	" 10 mins.	Creamed (75)	Creamed (90)	Creamed (30) Curdy
(chloroform)	" 3 hrs.	" (30)	" (50)	No change
"	" 20 hrs.	No change	No change	" "
Formula IX:	" 10 mins.	Settled (40) (trace	Settled (40) (trace	Separated (40) (half
(sulphur)	" 3 hrs.	" (25) at	" (25) at	" (25) at
"	" 20 hrs.	No change top)	No change top)	No change top)

The heated dry gel was included because of the possible advantages at the dispensing bench of using a dry, easily weighed powder rather than a sticky paste.

Procedure

Various liquids immiscible with water were emulsified using the aluminium hydroxide preparations in amounts equivalent to 0.25 per cent. Al_2O_3 for the paraffin emulsions and to 0.5 per cent. Al_2O_3 for all others. The method used was to homogenise the coarse emulsion made by shaking the oily phase in a bottle with the emulgent and half the water, then make up to volume and rehomogenise. In Formula III the alcohol was added after the first homogenisation.

Formula I:	Liquid Paraffin	25	
	Agent equiv. to	0.25	Al_2O_3
	Water to	100	
Formula II:	Liquid Paraffin	25	
	Oleic Acid	0.05	
	Agent equiv. to	0.25	Al_2O_3
	Water to	100	
Formula III:	Liquid Paraffin	25	
	Agent equiv. to	0.25	Al_2O_3
	Alcohol equiv. to	25	Et OH
	Water to	100	
Formula IV:	Arachis Oil	25	
	Agent equiv. to	0.5	Al_2O_3
	Water to	100	
Formula V:	Castor Oil	25	
	Agent equiv. to	0.5	Al_2O_3
	Water to	100	
Formula VI:	Paraldehyde	25	
	Agent equiv. to	0.5	Al_2O_3
	Water to	100	
Formula VII:	Eucalyptus Oil	10	
	Agent equiv. to	0.5	Al_2O_3
	Water to	100	
Formula VIII:	Chloroform	10	
	Agent equiv. to	0.5	Al_2O_3
	Water to	100	
"Unemul" was suggested (1), (2), for the suspension of troublesome insoluble solids. Precipitated Sulphur has been chosen as a typical example.			
Formula IX	Precipitated Sulphur	10	
	Agent equiv. to	0.5	Al_2O_3
	Water to	100	

The stabilities after storage for 10 minutes, 3 hours and 20 hours are shown in the Table. The figures shown in brackets after a reference to creaming indicate the approximate percentage volume occupied by the concentrated emulsion. In Formulae VI and VIII the dispersed phase concentrated at the bottom of the emulsion. After one week results were not appreciably different, except for Formulae III and VII: these results are also included in the Table.

Discussion

In general the stability of this series of emulsions follows the general pattern set in Part II.

It is confirmed that the dried gels are relatively unsatisfactory. In most cases they gave emulsions which were curdy, and whilst those of paraldehyde, eucalyptus oil and of chloroform were at least as good as those made by some other emulgents in frequent use (e.g. quillaia), they were invariably inferior to those made with the 10 per cent. gels. The results for Formula IX indicate that the dried gel is also inferior for the suspension of insoluble powders.

A comparison of results for the two 10 per cent. gels suggests that emulsions made with the extemporaneous preparation are slightly more stable. The differences are probably not significant, but it seems safe to say that the aluminium hydroxide gel heated at 115 deg. C. for three hours is at least as effective as "Unemul."

Hopkins (1) suggested that when liquid paraffin was emulsified with "Unemul," the inclusion of a trace of oleic acid improves the product. This is not confirmed. The amount of oleic acid added and the order of mixing

seem to be important, and these aspects are being investigated in more detail.

The inclusion of ethyl alcohol in Formula III was expected to show that the emulgents under test were not adversely affected: in fact, stability was increased. This is probably due to—

(a) a reduction in density of the continuous phase, so that it more nearly approaches the density of the paraffin, and

(b) an increase in the viscosity of the continuous phase. Perhaps it is significant that the paraldehyde emulsions in which the densities of the two phases are approximately the same are very stable.

Summary

1. A wide range of liquids immiscible with water have been emulsified with three preparations of aluminium hydroxide,

(a) "Unemul,"

(b) a gel of approximately the same strength heated at 115 deg. C. for three hours, and

(c) Dried Aluminium Hydroxide Gel B.P.C. heated at 150 deg. C. for six hours.

2. The dried gel is inferior to the pastes in emulsifying properties.

3. The extemporaneously prepared gel is as effective as "Euemul" for the emulsification of arachis, castor and eucalyptus oils, paraldehyde, chloroform and liquid paraffin, and also for the dispersion of precipitated sulphur.

This work was carried out in the laboratories conducted jointly by The Pharmaceutical Society of South Australia and The University of Adelaide. I am indebted to the Senior Lecturer and to my colleague, A. E. Bowey, for helpful assistance.

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- (1) Hopkins, S. J., *Pharm. J.*, 1940, 91, 28.
- (2) Swallow, W., and Whittet, T. D., *Pharm. J.*, 1941, 93, 226.
- (3) Toal, J. S., *Pharm. J.*, 1945, 154, 227.
- (4) Haynes, H. G., *Pharm. J.*, 1946, 157, 154.
- (5) Cooper, J. W., and Gunn, C., "Dispensing for Pharmaceutical Students," Pitman, London.

THE SOLUBILITY OF CRYSTAL VIOLET IN VARIOUS SOLVENTS

By R. A. Anderson

Crystal Violet is the official name for hexamethyl-pararosaniline hydrochloride. It is included in Rowe's Colour Index (No. 681) under many names including methylviolet 10B. The name Methyl Violet (Methyl-viola) was used in the 1934 B.P.C. for a mixture of substances, the hydrochlorides of tetra-, penta-, and hexa-methylpararosaniline.

The name Gention Violet has been used to describe various dyes of this type. In some cases (e.g. in U.S.P. XIII) it was used to describe mixtures of dyes similar to methyl violet with various amounts of dextrin. This position was clarified when the pure fully methylated dye was included in the 1948 Pharmacopoeia with a synonym of Medicinal Gention Violet.

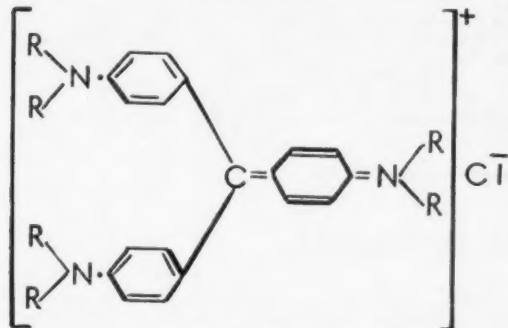
This pure compound is much less soluble than methyl violet, and it is no longer possible to prepare the 1 or 2 per cent. aqueous solutions which physicians continue to prescribe.

The use of ethyl alcohol-water mixtures has been suggested (1), (2), to increase the solubility of Crystal Violet by the required extent. Investigation of the solubilities of other pharmaceutical substances by Large and Nicholson (3), Bowey (4), and Anderson (5) all indicate a general pattern that substances which are slightly soluble in water do not have that solubility

greatly increased by dilute alcohols even though the substance may be very soluble in strong alcohols.

It is conceivable that in some cases (e.g. application to denuded areas) the use of alcohol is not desirable, and for these the use of glycerin or propylene glycol, or methyl violet in water, may be better. It is felt, although no real evidence is available, that the usual method of filling such prescriptions is to use the more soluble but less pure (?) methyl violet.

Tables or graphs showing the solubility of Crystal Violet in potentially useful solvents have not been available. This note records and discusses the figures obtained for solubilities in the vehicles considered most likely to be useful at the dispensing bench.



In Crystal Violet, R = CH₃.

In Methyl Violet, R = CH₃ or H according to degree of methylation.

Methods

Excess dye was added to the various solvents (which are listed in the table) in stoppered bottles which were raised to a temperature about 25 deg. C. for about 48 hours, and shaken several times over this period. The solutions were then cooled to 19-21 deg. C. and the strengths at this temperature were determined by one or both of two methods.

(a) Solubilities in water and dilute alcohols were obtained by evaporating measured volumes and drying at 110 deg. C. to constant weight. This method was not suitable for the solutions containing glycerin and propylene glycol.

(b) The strengths of all solutions were estimated colorimetrically. Determinations were made in a Unicam photoelectric colorimeter using the peak wavelength of 595 millimicrons. The Beer-Lambert law was found to apply for concentrations from 0 to at least 0.004 mgm. per ml., and the solutions under test were diluted to fall within this range. (The standard solu-

TABLE
Solubilities at 19-21 deg. C. of Crystal Violet as a w/v Percentage

Solvent	Colorimetric Result	Gravimetric Result	Average
Water	0.55	0.63	0.59
10% v/v propylene glycol	0.97	—	—
10% v/v glycerin	0.66	—	—
20% v/v glycerin	0.95	—	—
50% v/v glycerin	1.85	—	—
5% v/v alcohol	0.89	0.97	0.93
10% v/v alcohol	1.81	—	—
15% v/v alcohol	4.1	3.9	4.0
20% v/v alcohol	7.2	6.8	7.0
30% v/v alcohol	15.9	15.7	15.8

tions were calculated with reference to Crystal Violet dried at 110 deg. C. to constant weight—when dried to constant weight at 110 deg. C. the sample lost 1.4 per cent. of moisture.) The minute amounts of glycerin, ethyl alcohol and propylene glycol were found not to interfere with absorption.

Results

In the table the results obtained by the different methods are shown separately. In the cases where both methods have been used for the same solution, mean figures are shown in column 4, and these averages have been plotted in the graphs.

Fig. 1

Solubility of Crystal Violet in Glycerin-Water Mixtures at 19-21 deg. C.

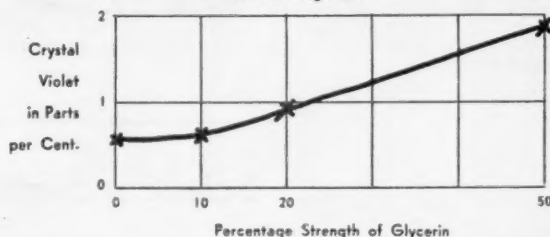
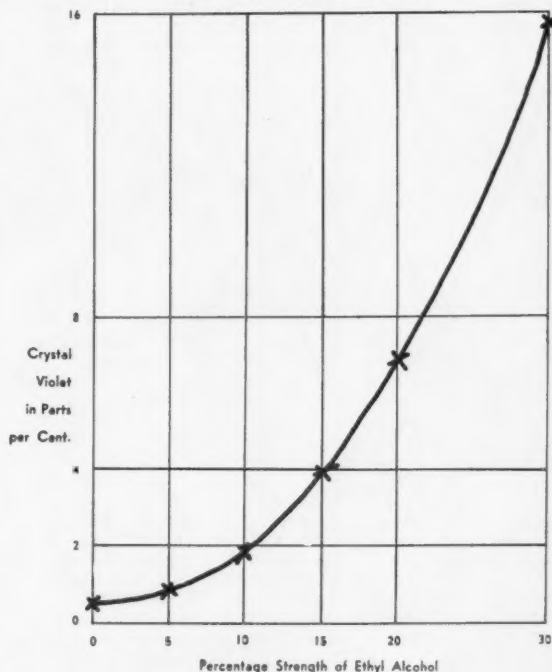


Fig. 2

Solubility of Crystal Violet in Ethyl Alcohol-Water Mixtures at 19-21 deg. C.



Discussion

The discrepancies between the results obtained gravimetrically and those obtained colorimetrically are probably partly due to variations in temperature within the range 19-21 deg. C. Whilst appreciable by ordinary standards, they are considered to be satisfactory for the present purpose—to determine the strengths of

ethyl alcohol, etc., in which prescribed concentrations of Crystal Violet will dissolve. In the dispensing laboratory, strengths of solvent somewhat in excess of those shown to be necessary would be used for the following reasons:

(a) The solubilities shown here were determined at 19-21 deg. C. because the Pharmacopoeia expresses solubilities at 20 deg. C. Whilst room temperatures reach this figure for several months each summer, for a large part of the year room temperatures are in the region of 10-15 deg. C.

(b) It is difficult to see when solution is complete, because of the intense colour of relatively weak solutions.

(c) Rate of solution in near saturated solutions is slow. On the other hand, it is reasonable to suppose that if an aqueous solution is prescribed the lowest strength of alcohol which is certainly effective should be used.

It is interesting to note that the 1948 B.P. gave the solubility of Crystal Violet in water as 1 in 150 at 15.5 deg. C., and that in 1953 this was reduced to 1 in 200 at 20 deg. C.

The strength of Crystal Violet most often ordered is 1 per cent., and it can be seen from the results that this concentration requires the use of about 7 per cent. alcohol, 15 per cent. of propylene glycol or 25 per cent. of glycerin. Of these the dilute alcohol will be used most often. Two per cent. solutions of the dye require about 12 per cent. ethyl alcohol for certain solutions.

Although of little or no practical significance, it might be pointed out that Figure 2 also indicates that the solubility in 90 per cent. alcohol is probably in excess of 1 in 20 which is that recorded in the 1949 Codex.

This work was carried out in the laboratories conducted jointly by The Pharmaceutical Society of South Australia and the University of Adelaide.

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- (1) Ashley, M. G., *Pharm. J.*, 1951, 113, 305.
- (2) Editorial Comment, *Pharm. K.*, 1952, 114, 369.
- (3) Large, D. K., and Nicholson, D. H., *Austral. J. Pharm.*, 1946, 884.
- (4) Bowey, A. E., *Austral. J. Pharm.*, 1957.
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Science Section (Continued)

EPILEPSY AND ANTICONVULSANT DRUGS

A. J. Cobcroft, Victorian College of Pharmacy

The anticonvulsant drugs dealt with in this article are limited to those used to prevent or control the convulsive seizures or other symptoms of epilepsy. Drugs used more particularly for the relief of the symptoms of Parkinsonism are not included in this survey.

Before it was recognised that epilepsy was associated with abnormal activity of the brain, it was believed that the disorder was due to the presence of "evil spirits" in the afflicted person. It is little wonder that historical records describe all sorts of weird and nauseating remedies for the "falling sickness." Amongst these remedies might be mentioned a "boar's bladder, taken when full of urine and dried in an oven," or the more gruesome "Liquor Cranii Humani," prepared from unburied skulls, preferably of criminals who had died a violent death.

The treatment of epilepsy took a more rational turn with the introduction of bromide therapy towards the end of last century, although their use was then based on the belief that their efficacy might be due to anaphrodisiac properties. Organic bromo-compounds are not widely used to treat epilepsy. Inorganic bromides are occasionally effectual when other drugs are not, but they are not widely used. Apart from coincident bromide dermatitis, the dosage level necessary to control the symptoms of epilepsy usually maintains the patient in a state of chronic mental inertia and may hasten cerebral and psychic deterioration.

Most of the compounds used at the present time contain nitrogen, either in an open-chain structure or a simple heterocycle. These include such compounds as Phenobarbitone, Methylphenobarbitone, Phenytoin, Methoin, Troxidone, Primidone, "Phenurone," and "Hibicon." No one drug controls all the main types of seizure. It is necessary to administer at least one drug for each type of seizure to which the patient is subject. There is no standard system of dosage, but it is usual to start with a small amount and increase the dose until seizures are controlled, unless untoward side-effects appear. If they do the drug may be changed gradually to another type.

The drugs are generally described as being useful either for "grand mal" or for "petit mal." When the patient loses consciousness and at the same time suffers

from general convulsions the attacks are spoken of as major epilepsy or grand mal. If the convulsive seizures of grand mal follow one another in fairly rapid succession the patient is said to be in "status epilepticus." If consciousness be lost, perhaps only momentarily, without coincident convulsive phenomena, the attack is then referred to as minor epilepsy or "petit mal." The patient usually does not remember the occurrence of these attacks. They may be succeeded by a phase of dreamy automatism of varying duration and intensity. There are other forms of epilepsy whose symptoms are not so clearly defined.

A useful adjunct in the diagnosis of epilepsy by the physician is the electroencephalogram, which shows characteristic abnormalities in the brain-wave patterns indicative of the various forms of the disorder.

Phenobarbitone was introduced by Hauptman as an anticonvulsant after its synthesis in 1911. This marked the beginning of a new phase in the therapy of epilepsy. Phenobarbitone and Methylphenobarbitone are established as the outstanding members of the barbiturate series for the control of grand mal. They are not so effectual for the control of petit mal, and in some cases may even aggravate the attack. There is not a great margin between the anticonvulsive and hypnotic doses of these drugs. For this reason attempts have been made to discover drugs which control convulsions without depressing the activity of the central nervous system, and which are free from other toxic properties.

One line of investigation has led to the preparation of compounds analogous in structure to Phenobarbitone, with an open-chain structure in place of the heterocyclic malonylurea. The result has been the introduction of phenylacetylurea—"Phenurone"—for the treatment of petit mal. Its use may be attended by undesirable side-effects, so that dosage must be carefully controlled by the physician.

A further development in this direction is the compound N-benzyl- β -chloropropionamide or "Hibicon." It is claimed to have anticonvulsant properties equal to those of Phenytoin, with a higher therapeutic index. It is comparatively free from analgesic and sedative properties.

A minor change in the structure of Phenobarbitone produced Primidone, B.P. Addendum, 1955. This differs from Phenobarbitone only in the replacement of the oxygen atom of the urea portion of the ring-structure

The H.W. Woods Travelling Scholarship 1957

Value of Scholarship

This is the first H. W. Woods Travelling Scholarship to be announced. The donor, H. W. Woods Pty. Ltd., has advised that a similar scholarship will be given every year.

The scholarship is valued at £A1250.

Object

The object of the scholarship is to enable young Australian pharmaceutical chemists to further their training by means of study or research overseas in a subject or subjects related to the teaching of pharmacy or in any branch of pharmacy or pharmaceutical practice.

CONDITIONS OF AWARD OF 1957 SCHOLARSHIP

The donor has given the Executive of the Pharmaceutical Association complete authority to determine the terms and conditions on which the scholarship shall be awarded.

Conditions of the award for 1957 are:

1. *Qualifications*

The Applicants must be registered pharmaceutical chemists and graduates of a recognised pharmaceutical teaching establishment in Australia.

2. *Applications*

- (a) The latest date for receipt of applications is **May 31, 1957.**
- (b) Applications must be addressed to the Hon. General Secretary, Pharmaceutical Association of Australia, 360 Swanston Street, Melbourne. Envelopes must be endorsed: "H. W. Woods Travelling Scholarship."
- (c) Applicants must submit an outline of the project they propose to carry out together with evidence of their ability to do so. Each applicant must forward with the application the names of three suitable persons as referees. One of the referees should be the head of the Pharmacy Department or College of Pharmacy from which he graduated.

3. *Conditions*

- (a) The successful applicant will be required to undertake studies, investigation or research for a period not less than 12 months or one academic year in such countries as may be approved.
- (b) The award of the scholarship will be made by the Executive of the Association, and its decision will be final.
- (c) The successful applicant will be required to submit to the Executive periodical reports on his work at times to be agreed and a detailed report within three months after expiration of the scholarship.
- (d) An undertaking will be required from the holder of the scholarship that he will return to Australia and remain in active association with pharmacy for at least two years after expiry of the scholarship; if required by the Association he will undertake to deliver a series of lectures or addresses on his work abroad in two or more States of the Commonwealth.

by two hydrogen atoms. The main value of Primidone is its lack of toxicity combined with good anticonvulsant properties, although it may have a slight hypnotic effect.

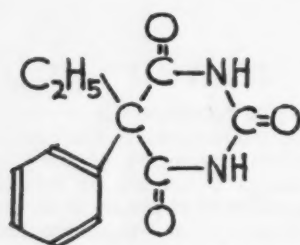
Heterocyclic structures with five-atom rings also have an established place in the treatment of epilepsy. The better-known classes of such compounds are the 5,5-disubstituted hydantoins and the alkyl-substituted oxalazolidinediones. Phenytoin Sodium and Methoin are the official representatives of the former class; the latter class is represented by Troxidone, which is 3,5,5-trimethyloxazolidine-2,4-dione.

Phenytoin Sodium combines the lowest depressant effect with the highest anticonvulsant activity of the hydantoin series. Phenylethylhydantoin is no longer used because it is considered to be too toxic. This

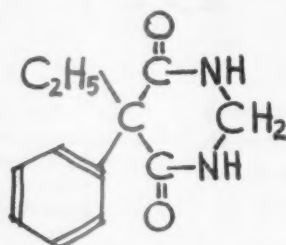
Extensive clinical trials are necessary before any such drug is introduced for use by physicians in general practice.

Attempts have been made to correlate chemical structure with pharmacological activity of anticonvulsant drugs, but much remains to be learned about this aspect of the subject. The disturbances of the nervous "mechanisms" which give rise to convulsions and other epileptic symptoms are not thoroughly understood. This complicates the problem of discovering how the various drugs mediate in controlling the symptoms of epilepsy.

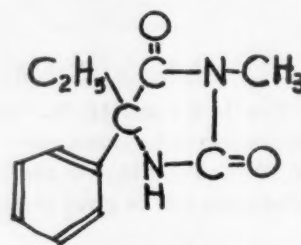
Even though the problem of epilepsy and its treatment has not been finally solved, the physician is in command of many valuable drugs which assist the epileptic patient towards the enjoyment of a useful life, be-



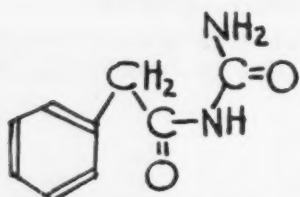
PHENOBARBITONE



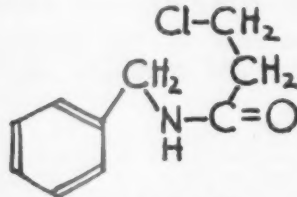
PRIMIDONE



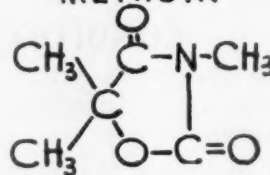
METHOIN



"PHENURONE"



"HIBICON"



TROXIDONE

STRUCTURES OF TYPICAL ANTICONVULSANTS

conclusion may need to be revised in the light of the fact that Methoin, which is N-methyl-phenylethylhydantoin, is demethylated by the body to the parent compound—phenylethylhydantoin. Methoin has been found effectual in the treatment of grand mal.

Troxidone is claimed to have analgesic properties comparable to those of aspirin, and to be relatively free from toxicity. It resembles the bromides and barbiturates in its sedative effect at the anticonvulsant dosage level. It also has an effect on vision, giving some patients the impression that all surrounding objects are brightly illuminated.

Paramethadione, 3,5-dimethyl-5-ethyloxazolidine-2,4-dione, and the closely related 3-methyl-5,5-dipropyl homologue, are used in similar dosages to Troxidone for the treatment of petit mal.

Research continues for better anticonvulsant drugs. New compounds are evaluated for their relative capacity to prevent convulsions induced by the administration of convulsant drugs, particularly Leptazol, to test animals such as cats, dogs, rabbits, and mice. They are also tested for their ability to raise the threshold of electrical stimulation needed to produce convulsions in test animals. Toxicity tests are made in order to establish a therapeutic index. The most promising of the drugs may then be given clinical trials on volunteer human patients who are undergoing hyperinsulin or electrical treatment for psychiatric disorders.

cause it is possible to prevent the convulsive attacks, and in most cases to keep the symptoms of the disorder in complete abeyance.

Reading References

Goodman and Gilman: "The Pharmacological Basis of Therapeutics."

Krantz and Carr: "Pharmacologic Principles of Medical Practice."

Barlow: "Introduction to Chemical Pharmacology."

TRIAL OF MEPROBAMATE

The need for great reserve in accepting the claims made for meprobamate—that it is the ideal drug for the treatment of insomnia, tension and anxiety—is mentioned in a leading article in the *British Medical Journal* for November 24; reference is also made to its disadvantage of costing the hospital 24 times as much as the equivalent dose of a short-acting barbiturate. A report of a controlled trial of meprobamate, undertaken by E. D. West and A. Fernandes da Fonesca (*ibid.*, 1206), describes its use in 151 psychiatric out-patients who received doses ranging from 400 mgm. twice daily to 800 mgm. four times daily; the usual dose was 400 mgm. three times a day and 400 mgm. at night for

insomnia. Blood pressure was unaffected. Relief of symptoms was noted in 58 per cent. of patients with chronic anxiety and tension states, but the drug was not effective when anxiety or agitation was severe. In a double blind trial in which meprobamate was compared with an inert tablet, observations on 26 patients suggested that the results in the uncontrolled trial were due (at any rate in part) to a specific pharmacological effect of the drug, instead of to the total therapeutic situation. A further double blind trial in which the effect of meprobamate was compared with sodium amylbarbitone in 51 patients with psychoneurosis indicated that, if either drug was given for short periods to patients with anxiety and tension, most of them would receive about equal benefit. No serious side-effects were observed, but transient side-effects occurred in about five patients.—Pharm. J., December 1, 1956.

PROMETHAZINE FOR PIN-WORM INFESTATION

One of the commonest worm-infection diseases in humans is enterobiasis, due to the pin-worm *Enterobius vermicularis*. It has been estimated that there are at least 18 million sufferers in the United States and Canada. The symptoms of heavy infection include intense peri-anal pruritus, general debilitation, gastrointestinal disturbances, and insomnia; mild infestations are often almost symptomless, and may be discovered only by accident.

A new method of treatment for enterobiasis, involving the administration of a large single dose of 125 mg. of promethazine hydrochloride (B.P. dose—75 mg. daily) has now been described by Avery (*J. Amer. Med. Ass.*, 1956, 161, 681). The treatment was given to 100 patients (mostly children between 3 and 12 years) suffering from proved infection with *E. vermicularis*; each patient received ten 12.5 mg. promethazine tablets at bedtime.

In 97 of the patients the treatment cleared the infestation. The author observed no toxic effects from the high dose. Five children experienced nightmares during the night of the treatment, but as nightmares are a common symptom of pin-worm infestation, it was thought that this apparent side-effect was due to the sudden release of toxic substances from the worms when acted upon by the promethazine.—*The Alchemist*, September, 1956.

NEW ATOMIC ENERGY REACTOR: HARWELL, ENGLAND

Enriched Uranium : Heavy Water

The new research reactor at Harwell which has taken 2½ years to construct was declared open by Sir Cyril Hinshelwood, President of the Royal Society, on November 21; it had become "critical" for the first time on November 7, when the final fuel element was inserted by Sir John Cockcroft, Director of the Atomic Research Establishment.

Dido, as the new reactor is known (from the formula for heavy water, D₂O), is the most powerful reactor of its kind in Western Europe. It will develop about 10 megawatts of heat at full power, and its neutron flux will be about 10 to the power of 14 neutrons per square centimetre per second. The fuel is highly enriched uranium and the moderator is heavy water.

The core of the reactor is an array of 25 vertical boxes each made up into a composite fuel element from 10 curved uranium-aluminium alloy plates; the array of boxes forms a rough cylinder about the size

of a tea chest. The reactor is controlled by moving cadmium-sheathed "signal arms" into the core between the fuel elements. The circulating heavy water, which is forced upwards through the fuel element assembly for cooling, is contained in an aluminium tank surrounding the core. This core tank is in turn surrounded by a graphite reflector sealed into a helium-filled steel tank and by the concrete biological shield. The heavy water is pumped through the core tank from a circuit outside the reactor; the heat generated by the system is transferred to a secondary coolant, ordinary water, in a heat exchanger in the heavy-water circuit. The secondary coolant dissipates the generated heat to the atmosphere in cooling towers outside the reactor building. The whole of the reactor area is enclosed in an airtight steel shell about 70 ft. high and 70 ft. in diameter with controlled entrances so that any accidental spread of radioactivity can be readily confined. Specially designed experimental holes have been built into the reactor to meet particular experimental requirements. In some of these holes it is possible, for example, to control sample irradiation times very precisely, or to permit the emergence of defined neutron beams. It is also possible to maintain two large-scale "engineering pile loops" in the reactor to test fuel assemblies for advanced power reactor designs; some holes are to be used to manufacture cobalt-60 at high activity levels for hospital and industrial use in quantities equivalent to about 30 kilograms of radium per annum.

The cost of the reactor was £1,500,000, apart from the cost of the fuel and the heavy water. Each charge of 2.5 kg. of fuel, which lasts about six weeks, costs £60,000, and the heavy water, which comes from America, costs £20,000 a ton; the reactor requires 10 tons.—Pharm. J., December 1, 1956.

THE NEXT B.P.

It was reported to a meeting of the General Medical Council, held recently, that work has continued on the preparation of the new monographs proposed in the last report for inclusion in the next edition of the British Pharmacopoeia. It is not intended to proceed with monographs on dihydrotachysterol, dimenhydrinate, prednisolone acetate and promethazine chlorothephyllinate, and their preparations. Monographs on dextran solution, mannitol, phenoxymethylpenicillin, prednisone and streptoduocin are being examined, but, as with other proposals, the inclusion of the drugs will depend on the drafting of suitable specifications within the time available in accordance with the programme for production of the book. It is proposed to delete the monographs on butacaine sulphate and sulphathiazole and to retain those on caffeine and phenolphthalein.—Pharm. J., December 1, 1956.

U.S. HAS NEW GOAL FOR POLIO RESEARCH

William L. Laurence, writing in *The New York Times* (Science in Review) reported as follows on an address by Dr. J. E. Salk given before an international conference in New York:—

"Dr. Jonas E. Salk, of the University of Pittsburgh School of Medicine, creator of the Salk anti-polio vaccine, presented last week a new concept of the possible causes underlying baffling diseases which emerge in adult life. According to this concept, which may lead to radically new preventive measures for many of the plagues that attack mankind past middle life, a number of non-infectious diseases of older age

groups may be the end results of the invasion of the central nervous system in childhood by polio or other viruses, even though such invasion does not manifest itself by any clinical symptoms at the time.

Such a virus invasion of the central nervous system, Dr. Salk suggested at an international conference under the auspices of the New York Academy of Sciences, may weaken the nervous system to such an extent that it cannot properly resist stresses and strains that accumulate in the course of the individual's lifetime.

President Honoured

The conference, which dealt with "cellular biology, nucleic acids and viruses," was held in honour of the 65th birthday of Basil O'Connor, President of the National Foundation for Infantile Paralysis, the organisation that made possible the development of the Salk vaccine, which, it is now expected, will eliminate paralytic polio in the near future.

"It is known," Dr. Salk told the conference, in which leading authorities from eight nations participated, "that severe hypertension (high blood pressure) and gastric and duodenal ulceration can occur as the result of certain types of damage to the central nervous system, and that polio virus infections have produced such effects. It would be of interest to know whether or not polio virus infections could cause subclinical damage to brain-stem centres that might not result in clinically manifest symptoms until a later time, under circumstances of growth, aging, or other stresses, as could occur after involvement of the cells of the spinal cord.

"One cannot escape reflection upon the possible consequences that might ensue as a result of the prevention of similar kind of damage to other portions of the central nervous system infrequently affected by the polio viruses."

Many other viruses besides the three types of polio virus, Dr. Salk pointed out, invade the central nervous system. There are those that are known to be the cause of common childhood diseases, and still other viruses are being recognised which can cause central nervous system effects simulating non-paralytic polio. It is also known that the virus causing cold sores, and the one responsible for chicken-pox, can remain in a latent state and become reactivated under a variety of circumstances later in life.

Dormant Viruses

It is therefore possible, he suggested, that some viruses might remain dormant in the central nervous system for years until they become reactivated under the stresses produced by life experiences. In view of this possibility he urged that medical scientists continue their efforts, similar to those that led to the development of the anti-polio vaccine, toward the goal of creating a multiple vaccine that would provide immunity in early childhood against all viruses that attack the nervous system.

Such a vaccine, Dr. Salk believes, would not only provide effective immunity for the young against the multiplicity of nerve-seeking viruses, but would also serve as an effective preventive against a host of diseases of still obscure origin which afflict individuals of mature years. A nervous system unimpaired by virus infection during childhood may thus be strong enough to stand up against the stresses and strains of adult life.

In effect, Dr. Salk pointed the way to the next goal for the National Foundation for Infantile Paralysis. Having achieved the original objective it had set for itself when it was established in 1938—the eradication of paralytic polio—its next goal should be to develop, with March of Dimes funds, an all-embracing multiple vaccine against all viruses attacking the nervous system."

CHARLES SINGER, MEDICAL HISTORIAN

Professor Charles Singer, historian of medicine and science, celebrated his eightieth birthday on November 2.

In commenting on this anniversary, *Nature*, November 3, 1956, said: Prof. Singer can look back on a life of striving and of achievement. His historical studies grew out of his clinical and research work. It is now fifty-one years since, returning from an expedition to Abyssinia, where he had medical and biological experience which many young men must have envied, he published his first clinical paper. There followed years of clinical work and of laboratory research, especially on gastric carcinoma. In the same week in which Fibiger announced the discovery of the parasite for which he was awarded a Nobel Prize, Singer independently discovered this parasite. He read several communications on these subjects at the International Congress of Medicine, which was held in London, 1913, and that year saw the zenith of his writing on these fields. Two years before that he had published his first historical paper, and from 1914 onwards he devoted himself to historical subjects. A short period at Oxford and some years in the R.A.M.C. during the First World War were followed by a post at University College, London, first as lecturer in, and later as professor of, the history of medicine. Though the years in London until his retirement in 1942 were full of great achievement, it is since that date that Prof. Singer has reaped his richest harvests. Besides several scholarly books which are of great importance in the history of medicine, he has contributed lavishly to a specialised branch of the history of the chemical industry, and for six years he has laboured on the monumental "History of Technology," of which he was the sole begetter, and in the production of which he has shouldered the major burden. May the approaching publication of the second volume of that five-volume work stimulate him to continue making the world his debtor.

DRUG THERAPY IN HYPERTENSION

In a paper read at the annual meeting of the British Medical Association in July last, A. Rae Gilchrist (*Brit. Med. J.*, 1956, 2, 1012) said that so many remedies are now available for the treatment of hypertensive vascular disease that discrimination is required in selecting procedures best adapted to the particular patient. He made the following points:—

(1) Preparations of *Rauwolfia serpentina* or of mixed alkaloids may be used with advantage for long periods; full benefit is not observed until the drug has been given for two or three weeks. Although side-effects are infrequent, the drug should be used with caution in instances of emotional instability or mental depression. (2) If the patient's diastolic pressure cannot be maintained below 100 or 110 mm. with rauwolfia, extracts of *Veratrum viride* may be added, starting with 2 mgm. four times a day and increasing cautiously. Significant hypotensive effects can be induced in about half the patients taking this drug. (3) Pentolinium tartrate is the methonium compound of choice, the dosage being regulated by measurement of blood pressure at frequent intervals throughout the day. Side-effects include constipation and blurring of vision. (4) Mecamylamine is more predictable and constant in its hypotensive effects than oral methonium compounds. The dose is determined by trial and error. (5) For patients whose renal function is moderately impaired, hydralazine in doses of 25 to 100 mgm. orally may be helpful; its disadvantage is the frequency of side-effects and toxic reactions associated with its use, such as headaches, flushings, palpitations, oedema, drowsiness, dryness of the mouth, anaemia, hepatomegaly and splenomegaly are enumerated, as well as conditions resembling rheumatoid arthritis or disseminated lupus. Reactions usually subside when the drug is discontinued.—*Pharm. J.*, November 10, 1956.

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ADDITIONAL NOTES ON CONTAINERS AND LABELS

1. REMEMBER THE FOLLOWING POINTS:

"Poison-type" bottles are prohibited as containers for liquid medicines which are to be swallowed. "Poison-type" bottles are not necessarily made of coloured glass.

Coloured glass bottles (amber, blue or green) are used for all types of medicaments, which include components which need protection from light, for example, emulsions of cod-liver oil, topical solutions of ephedrine, etc.

NOTE WELL

The dividing line between "clear glass" and "poison-type" is that the latter bottle is

DISTINGUISHABLE BY TOUCH

as required by the Regulations governing the sale of poisons.

2. **Dropper-type Bottles** are fitted with a screw cap which includes a dropping tube inside the bottle. The usual sizes are $\frac{1}{4}$, $\frac{1}{2}$ and 1 fl. oz. in both "poison-type" and "clear glass" styles.

NOTE WELL

Some plastic dropper bottles are made for use in the inverted position, or as atomisers. Some of these are **not distinguishable by touch**.

3. **Collapsible tubes** are used for creams and soft ointments. They protect the contents from light and dust and minimise transference of infection during application. Three types of nozzle are available on collapsible tubes.

- (a) The stub type for skin applications.
- (b) The short taper for eye and nasal applications, and
- (c) The long tube type for rectal and vaginal applications.

Stiff ointments are better not packed in a tube, since a tube cannot be effectively closed by hand to withstand the pressure required to eject the contents through the nozzle.

Phenol ointment, soft paraffin and the like require the addition of a clip to give a more effective closure unless the prevailing temperatures are high.

4. **Plastic containers** have a decided advantage over glass ones because they do not break when dropped. The effect of the wide range of drugs on plastics is not yet known. (Consider ampoule glass with the requirement to contain a minimum of free alkali, lead-free bottles for Liq. Ammon. Acet., and disposable plastic syringes for some parenteral injections, etc.)
5. **Paper or cardboard containers** are not within the requirements of the Poison Regulations, which require poisons to be packed in impervious containers.
6. **Round cardboard** and comparatively large flat boxes for tablets packed between cellophane/tinfoil both find a limited use. Such containers cannot be considered to be impervious, and so do not conform to Regulations regarding the packaging of poisons.
7. **FOR EXTERNAL USE ONLY**

This label is required by law on liquid liniments and lotions which contain poisons, irrespective of whether they are dispensed, compounded or ready packed medicaments.

However, dispensed medicaments are more commonly labelled with both **CAUTION! NOT TO BE TAKEN** and **FOR EXTERNAL USE ONLY**, the latter being placed as a strip addition over the main label headed with the former warning.

Either or both of these warnings are used in conjunction with a "poison-type" bottle, **NEVER** on a "clear-glass" bottle.

Conversely, a mixture label, a slip label, or a round label printed in black (or in a colour other than red) is never used on a "poison-type" bottle.

8. KEEP OUT OF REACH OF CHILDREN

A label bearing this instruction is desirable on many medicines, which may be safe for adults but not for children.

Notable examples are brightly coloured or nicely flavoured liquids plus coloured tablets or other solid dosage forms containing mercurials, iron preparations, antihistamines, aspirin (especially if flavoured), strychnine, barbiturates, sulphonamides or narcotics.

GENERAL PRINCIPLE FOR SPECIFIC DIRECTIONS WHEN ADDED IN HANDWRITING OR BY TYPEWRITER

(a) All medicines are labelled in a manner which provides **immediate** guidance in respect of the correct **method of use** by the patient. The **title** of the medicine therefore appears **first**, e.g.,

THE MIXTURE THE OINTMENT THE INHALANT

These words should be set out in **capital** letters by printing, handwriting, or typewriter, and followed by the specific directions given on the prescription.

GENERAL PRINCIPLES FOR OTHER LABELS

Shake the Bottle (usually printed in black) is always needed for liquid medicines containing insoluble or immiscible drugs and for complex admixtures which may deposit on storage.

This label may be used on bottles containing liquids for internal use, for external use, and for applications to mucous membrane.

It should be attached as a separate label just above the main label, leaving a small space between the two.

This makes the instruction prominent and tends to impress it upon the mind of the recipient.

The common practice of including **Shake the Bottle** as an integral part of the standard mixture label reduces the prominence of the instruction. Again, the automatic inclusion of the warning, with and without reason, must tend to reduce its significance.

The significance of the instruction is particularly vital with mixtures which contain small toxic precipitates that **must** be evenly distributed in each dose so as to avoid danger of poisoning the recipient when he takes the last two or three doses.

The important point is that you should critically examine each admixture on its merits and apply the principles of pharmaceutical chemistry in reaching a decision. This is not always an easy matter. Some guidance is therefore given in the following examples of admixtures which **do not require a Shake the Bottle label**.

Simple alkaline or neutral aqueous mixtures, such as those containing

1. Pot. Cit., Syr. Aurant.
2. Sod. Brom., Sod. Phenobarb., Syr.
3. Ammon. Bicarb., Tinct. Scill., Syr. Prun. Serot.
4. Sulphacetamid. Sod., Glycer.

Simple acidic aqueous admixtures, such as

1. Linctuses and elixirs.
2. Sod. Phosph. Acid., Tinct. Hyoscy.
3. Glycer. Acid. Pepsin., Tinct. Nuc. Vom.
4. Liq. Ferr. Perchlor., Pot. Chloras.

Miscible liniments, paints, gargles, drops, etc.

Remember that the mere fact that a **Shake the Bottle** label is frequently required does not warrant its being (always) used as a matter of habit.

The non-repeat type of label (printed in black) bears the following statement:—

"This prescription cannot be repeated without the consent in writing of your medical adviser."

It is attached to the container of any medicine (liquid or solid) which, because of **legal restrictions**, cannot be supplied to the patient again.

UNUSUAL EXAMPLES

Some specific preparations require unusual care, both when they are **dispensed** and supplied for a professional fee and also when **sold** on request over the counter.

This group includes a **limited range** of mouth washes and mouth paints which are packed and labelled in accordance with the procedure and the degree of danger associated with their use. The group is subdivided into two groups—

- No. 1. Those commonly used, and
- No. 2. The dangerous type.

No. 1—Mouth washes and mouth paints commonly used in the home.

Glycerin of borax (Glycer. Borac.).
Solution of hydrogen peroxide (Liq. Hydrog. Perox.).
Compound solutions of thymol (Liq. Thymol. Co. and Glycer. Thymol Rub.).

These are **NOT dispensed or sold** in poison-type bottles nor with labels bearing **Caution! Not to be Taken** printed in red.

Because these preparations are not dangerous and are widely used for infants' and adults' mouth toilet only once or twice daily and are not swallowed they

are dispensed and/or sold in clear glass bottles with plain sides. (Peroxide of Hydrogen is, of course, packed in amber bottles as advised by the official direction to protect from light.)

Labels are usually printed in black but **never** in red.

Other reasons for this special system are that the usual warning devices would

- (a) Unnecessarily alarm a parent in regard to (say) the use of glycerin of borax in the mouth of an infant, and
- (b) Would lessen the value of the same usual warning devices when used for tincture of iodine, camphorated oil, etc., which are potential dangers in the home.

No. 2—Mouth washes and mouth paints of the potent or dangerous type include:—

Arsenical solution (Liq. Arsen.).
Organic arsenicals (Neocarsphenamine: Acetarsol).

Arsenical solution may be required to be supplied without dilution, but it is usually ordered in the form of a compound mouth paint such as Bowman's paint (Pig. Arsen. et Ipecac.).

All these dangerous types are dispensed and sold with **FOUR WARNING DEVICES** irrespective of the proportion of arsenic present, namely:—

1. A poison-type bottle.
2. A **Caution! Not to be Taken** label printed in RED.
3. An additional label bearing the word **POISON** printed in RED.
4. A verbal instruction that great care must be taken to ensure that the preparation is not swallowed.

These precautions are necessary, since arsenic is a potent poison, which, because of its slow rate of excretion, is cumulative and dangerous. The labelling is the standard example of an oral medicament being labelled **POISON**.

When these potent products are sold on request without a prescription it is also necessary to comply with other sections of The Poison Regulations which further restrict the conditions of sale.

CONTAINERS AND LABELS USED FOR PURPOSES OTHER THAN DISPENSING

When drugs and medicines are sold on request over the counter, or recommended and sold by the pharmacist, they must be packed and labelled as required by The Food and Drugs Act and its Regulations. Four general principles must be followed, namely—

1. All containers must be impervious to the content irrespective of whether it is solid, semi-solid or liquid.
2. Noxious or poisonous liquids must be delivered in poison-type bottles.
3. All labels must include the name and address of the vendor in addition to the name of the drug itself.
4. Poisons must be labelled with an appropriate warning in addition to the name of the drug itself.

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Three minutes after the explosion the mushroom cloud had reached a height of 25,000 feet.
(U.S. Army Photograph)

ATOMIC ENERGY

Challenges

PHARMACY

Winning Essay — S. W. Gayfer Bequest
Competition, 1956.

by Philip Maxwell Green.

Ph. C., M.P.S. (Syd.), Ph. D., (Chicago), A.M.I.E.T. (Lond.), J.P.

Foreword by Dr. William Scott Kennedy, M.B., B.S.

Newspapers, the cinema and heresay evidence are largely responsible for what we know of the results of the release of Atomic Power. With Hiroshima and Nagasaki and Atomic Bomb tests fresh in our minds, the predominant factors which we recall are ones of horror and destruction.

But horror and destruction are not the only results of the Nuclear Age. More and more benefits to Mankind present themselves day by day.

In this Essay the author gives both sides of the picture. First, a graphic eye-witness account of the destruction at Hiroshima. Second, a description of the benefits accruing to Medicine, and thus to his chosen profession—Pharmacy.

From these two aspects of Atomic Power he issues a challenge to the Pharmaceutical Profession:

Prepare to use your scientific training in the horror and confusion of an atomic attack.

Prepare to learn new techniques in the handling and dispensing of radioactive preparations.

Meade Street, Bulahdelah 1C,
New South Wales, Australia.

September 17, 1956.

Preface

Following the close of World War II, when serving with the R.A.A.F. component of the British Commonwealth Occupation Forces in Japan, I not only saw the devastation that was Hiroshima, but also came into personal contact with many survivors of the atomic bomb. In those days, sensing the challenge of this new power, I felt the desire to write an article for the members of my own profession, based primarily on those things which I had seen and heard. This essay is the outcome of that ambition.

I certify that this is an original work, representing my personal observations, subsequent research and exposition of the subject matter. A list of standard text books which I consulted during the preliminary research appears in the Bibliography on page 21. I have not

wittingly derived information or assistance from any unacknowledged source.

I wish to express my sincere gratitude to Dr. William Scott Kennedy, M.B., B.S. (Syd.), of Bulahdelah, N.S.W., for his interest and technical advice during the writing of this work, and for his assistance in the production of the appendix of illustrations (following Section I) from photographs taken by me in Japan, negatives of which had been lost. He has also kindly written the Foreword.

I have also appreciated the assistance of Mr. Roger Bush, B.A. (Syd.), F.R.A.S. (Lond.), of Bulahdelah, N.S.W., who painstakingly read the first draft and offered valuable advice and counsel.

PHILIP M. GREEN.

Stroud Street, Bulahdelah 1C,
New South Wales, Australia.

September, 1956.

Introduction

In July, 1939, a group of nuclear physicists, amongst whom were brilliant European scientists who had fled for sanctuary to the United States of America, presented to President Franklin D. Roosevelt a document which outlined the possibilities of the construction and use of an atomic bomb in modern warfare. The promising results of experiments into the possibility of a chain reaction by French physicist and Nobel Prize winner Joliot-Curie led the President to authorise the com-



Devastated Hiroshima, where only reinforced concrete buildings withstood the effects of the atomic bomb.

mencement of research into the release of atomic energy.

Exactly six years later the world's first atomic bomb was ready for testing. Sufficient U235, the fissionable isotope, had been separated in the Gaseous Diffusion Plant at Oak Ridge; sufficient Plutonium had been produced in the Nuclear Reactor at Hanford; the United States Army Ordnance Department had developed the mechanism necessary for shooting together the component parts of the bomb to make a mass of critical size. To that date the whole project had cost 2,000 million dollars and then the burning question presented itself—had the previous six years of supreme effort and fantastic expense been worth while? Would A-Bomb I explode?

The test took place at the Alamogordo Air Base at Los Alamos in the New Mexico desert on July 16, 1945. The United States War Department issued the following official statement which requires no further comment—

"At the appointed time there was a blinding flash lighting up the whole area brighter than the brightest daylight. A mountain range three miles from the observation point stood out in bold relief. Then came a

tremendous sustained roar and a heavy pressure wave which knocked down two men outside the control centre. Immediately thereafter, a huge multi-coloured surging cloud boiled up to an altitude of over 40,000 feet. Clouds in its path disappeared. Soon the shifting stratosphere winds dispersed the now grey mass. The test was over. The project a success."

Three weeks later, on August 6, 1945, the atomic bomb obliterated the Japanese seaport of Hiroshima. Three days later the familiar mushroom cloud rose again over the ashes of Nagasaki. The damage and loss of life entailed in these two disasters were potent factors in bringing the Pacific phase of World War II to a close.

The successful explosion of the first atomic bomb heralded a new era in the history of mankind—"The Atomic Age." Before long it became crystal clear just how ill-equipped were the nations of the world in terms of government, law and ethics to know how to deal with man's growing skill in the art of self-destruction. Dr. Allison, of the University of Chicago, Ill., one of a team of brilliant nuclear physicists who had played a leading part in the development of the atomic bomb, expressed his fears of the consequences of success in these words—

"All of us who worked on the atomic bomb had a momentary feeling of elation when our experiment met with success; but that feeling rapidly changed to a feeling of horror, and a fervent desire that no more bombs would be dropped."

Surveying the first eleven years of the Atomic Age one fact emerges most clearly, namely, that mankind is faced today with a dual challenge. On the one hand is the tremendous progress which has been made in the development of atomic power for destructive purposes. Instead of one bomb there is now a great variety of atomic explosives and weapons for military use. Professor Szilard, a leading United States nuclear physicist, has claimed that the Cobalt Bomb, indiscriminately used, could produce enough radioactive dust to destroy all known forms of life on this planet. Man has now reached the stage where he can destroy himself, and the available facts indicate that a nuclear war would be far more horrible than ever before. And so the peoples of all nations have become justifiably alarmed at the grim possibilities which continue to follow the onward march of nuclear science.

On the other hand available facts also indicate that blessings barely contemplated eleven years ago will ensue from peaceful atomic research. No doubt many of the most far-reaching applications of atomic energy are not even dreamed of at the moment. Dr. E. H. Burhop says that "never before has the question of the use or misuse of scientific discovery been posed with such stark contrast." These then are the two sides of the atomic coin.

This atomic age presents a challenge to the members of the pharmaceutical profession, for there are definite indications that atomic power will play a steadily increasing part in the lives of its members in war and in peace.

It is proposed, therefore, to subdivide the remainder of this essay into two distinct sections—

- (1) To show how the pharmaceutical chemist may play his part in precautionary measures for civil defence and in the event of an actual atomic attack.
- (2) To indicate the use of radioactive isotopes in medical diagnosis and therapy, and also the possibilities of the sterilisation of pharmaceuticals by means of irradiation (fields not yet fully developed, but which command the close attention of the pharmaceutical chemist).



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SECTION I

Hiroshima—A Doomed City

The writer has vivid memories of the spectacle of the atom bombed city of Hiroshima as it appeared when he visited it as a member of the British Commonwealth Occupation Forces at the close of World War II. Some indication of the extent of the damage caused may be obtained from photographs taken by the writer which appear as an appendix to this section.

Unforgettably graphic, also, were the many personal interviews with survivors of the bombing which the writer recorded at the time, and from which an over-all picture of the dread occasion may be pieced together.

The city of Hiroshima, which stretches over approximately four miles, is built on a group of flat islands lying in the mouth of the Otagawa River, facing the picturesque waters of the Inland Sea, and flanked by a curved mountain range rising to seven and eight hundred feet. Pre-war Hiroshima had been one of Japan's modern cities and boasted the largest rayon factory in the country.

It contained a large number of flimsy, timber-frame, Japanese structures, with the typical bamboo and mud outer walls, paper screen interior walls, and heavy tile



Gutted concrete buildings tower above the ashes of the city.

or thatch roofs. Surrounding the old central part of the city was a zone of modern industrial undertakings. Buildings here varied from light, single-storied, steel and concrete factories, shops and warehouses, to massive, Western-style, multi-storied, reinforced concrete buildings. On the outskirts of the city there were a number of large plants devoted to engineering and silk manufacture.

This city of a quarter of a million people also prided itself in the many fine public buildings, including the University, Town Hall and the Museum of Science and Industry, which had been pre-war showplaces.

Thus in Hiroshima it was possible to see the effects of atom bombing on various types of structures and at varying ranges. Let it be remembered at all times that what happened to this city on August 6, 1945, could happen to any city in the world in a future war.

Eye-witness Accounts

"The front of Heaven was full of fiery shapes, of burning cressets . . . the frame and huge foundation

of the earth shook like a coward." (Henry IV, Act 3, Sc. 1.)

Many conflicting eye-witness accounts were received of what transpired, but all agreed on the following chain of events. Watchers on the ground saw a cylinder, supported by three parachutes, drop from one of two American Super Fortresses. Suddenly there was an emission of white blinding light, which was described by many as similar to a magnesium flare. A Roman Catholic priest from the Jesuit Mission on a hill overlooking the city, who saw the flash, thought that one of the many ammunition dumps in the city had blown up. Others believed that there had been a great flash of lightning.

Immediately afterwards a radiant ball of fire appeared, which grew rapidly in size and brightness until it seemed to be many times brighter than the sun. Within seconds this fireball, still growing in size, began to rise rapidly. At the end of the first minute the fireball was some hundred yards in diameter and had risen to a height of 5,000 feet. Gradually it lost its brilliance and became a huge yellow cloud, surging up to an altitude of 25,000 feet, rather like a mushroom in shape, whilst at its foot lay the shattered, smoking ruins of the city.

Mr. Mashimoto, who witnessed the explosion from Itsukaichi, a village about four miles from Hiroshima, recalled the tremendous cloud which rose rapidly above the city and described it as a beautiful golden colour against the clear blue morning sky.

Innumerable fires broke out in the city and these spread rapidly and burned unchecked for many days, creating a huge conflagration, and completely gutting the old part of the city, where wooden buildings burst into flames, burning trapped occupants to death. Buildings in the industrial zone were also severely damaged by fire, which was not confined to wooden structures only, but which raged fiercely in many concrete buildings, incinerating the contents. In the Hiroshima Railway Yards wooden sleepers are reported to have burst into flames.

Let Dr. Hachiya, of the Hiroshima Communications Hospital, describe the scene—

"The sky was filled with black smoke and glowing sparks. Flames rose and the heat set currents of air in motion. Updraughts became so violent that sheets of zinc roofing were hurled aloft and released, humming and twirling, in erratic flights. Pieces of flaming wood soared and fell like fiery swallows . . . scorching winds howled around us, whipping dust and ashes into our eyes and up our noses. Our mouths became dry and our throats raw and sore from the biting smoke pulled into our lungs. Coughing was uncontrollable."

Intense heat rendered the task of fire-fighting almost hopeless. Indeed practically all such communal organisation was virtually paralysed as officials and rescue squads joined in the general flight and panic.

Upon fission the bomb (which had an explosive effect equal to that of 20,000 tons of T.N.T.) generated a shock wave of high pressure, which, at the centre of the explosion (hereinafter termed the hypocentre), not only demolished buildings, but also pulverised the debris. As the high pressure wave spread rapidly across the city with a loud rumbling sound its intensity was compared by many eye-witnesses to that of a cyclone, leaving in its wake a trail of unprecedented destruction and an all-pervading cloud of dust.

Those who witnessed the explosion of the atomic bomb soon coined a new word to describe it—Pikadon. "Pika" in Japanese means a bright flash of light, and "Don" a loud sound or boom. Hence in the local dialect "flash-bang" came to mean the atomic bomb.

Mass destruction and distortion of the entire framework of buildings in a direction away from the blast were most noticeable; roofs were carried long distances; houses caved in and walls toppled; steel window frames were wrenched from their seating; the concrete columns flanking the entrance of the Shima Hospital were driven some distance into the ground; wrecked bridges collapsed into the rivers (further disorganising rescue attempts); wireless masts were twisted beyond recognition; electric cables were torn down in hopeless chaos; railway cars, trams and buses were smashed to matchwood.

The bronze-domed Museum of Science and Industry was reduced to ruins. The dome was destroyed, the brick and stone walls cracked and crumbled, and the interior devastated by fire. The ruins of this once proud structure have been preserved by the citizens of Hiroshima as a monument to the atom bombing of their city.

Amidst this wholesale destruction there remained here and there the fire-gutted remnants of reinforced concrete buildings which had miraculously escaped collapse, but they were pitifully few and served only to accentuate the scenes of ruin all about them.

There were a large number of victims who sustained injuries from the blast. Many were trapped beneath collapsing buildings; others were crushed by falling masonry; many were struck by flying debris, and injuries due to flying glass fragments were legion because windows up to 12½ miles from the hypocentre were shattered by heat and by concussion.

The atomic bomb also emitted great quantities of radiation. The greatest number of injuries and deaths, apart from those caused by the initial blast, were the result of ultra-violet radiation, the extent of the burns decreasing with distance from the centre of destruction. At the hypocentre, victim's exposed skin was immediately charred crisp black or dark brown. Many died at once, whilst others lingered on for a few hours. Tens of thousands of dead and dying lay everywhere in the streets and the disposal of the bodies created a major problem for many weeks. Roofing tiles bubbled under intense ultra-violet radiation. Polished granite surfaces were roughened and concrete streets and footpaths were reddened. At distances of up to one and a half miles from the hypocentre very severe cases of burning were reported. Five hundred and eighty workers crossing a bridge were all seriously burned and nine died. In other places victims had all the clothes burned from their bodies in a fraction of a second, and sheets of blistered skin hung from them like crepe paper (I have seen survivors with hideous scarring on the side of the body which faced the flash, and quite normal on the other). Eyes, noses, ears and mouths were frequently charred away; the eyes of many victims melted in their sockets and then solidified upon cheekbones bereft of flesh. Silently they stumbled blindly through the streets of the city, seeking they knew not what. The rivers were choked with many thousands of bodies of those who had wandered sightlessly over the edges of the wrecked bridges of the city.

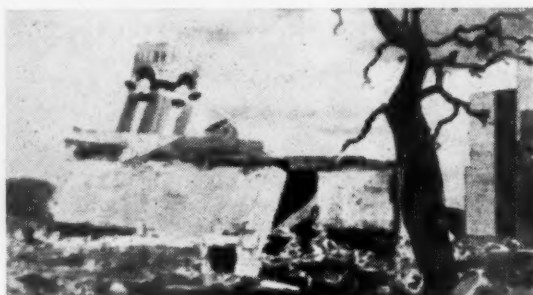
Light coloured clothing afforded some measure of protection, since it reflected the heat rays, whilst dark clothing absorbed them. As a result many victims displayed the unusual affect of burn patterns on their skin corresponding to the pattern of their clothing. In many cases at distances up to a mile and a half clothing was ignited, thus causing contact burns which were frequently complicated by being contaminated with fragments of charred fabric. In addition to the foregoing, the usual types of burns and scalds were sustained by those who were trapped in burning and wrecked buildings, and experts estimated that altogether 90 per cent. of all casualties also suffered from burns. Even at dis-

tances of two and a half miles and more serious burns were reported.

The bomb also emitted large quantities of gamma rays of short-wave length which pass through the skin without affecting it. However, the various blood-forming tissues in the bone marrow, and the epithelium, proved to be most sensitive to the gamma rays, resulting in the onset of radiation sickness. It is estimated that about 35 per cent. of all casualties suffered from radiation sickness, approximately half of whom subsequently died.

The early symptoms were extreme thirst, weakness, dizziness, and nausea, followed within a few hours by high fever, frequent vomiting and diarrhoea. This period was then followed by a symptom-free interlude varying in different individuals from several days to several weeks. After that time decrease of blood platelets resulted in a variety of haemorrhagic symptoms—particularly of bloody faeces and uterine and nasal haemorrhages and the development of purple patches (petechiae) due to subcutaneous bleeding. Dr. Katsube, chief surgeon of the Hiroshima Communications Hospital, was the first to discover from post-mortem examination that petechiae had developed not only on the body surface, but also on the internal organs as well—particularly on the stomach, intestines, liver and spleen.

At this stage many patients were found to be suffering from acute gingivitis, infected ulcers in the mouth and falling hair. There was also a greatly reduced resistance to infection due to white blood cell deficiency and damaged intestinal linings. Death from anaemia due to non-formation of new red blood cells frequently occurred between one and three weeks after exposure



Collapse of the Shimomura Watch Shop due to the force of the shock wave.

to the deadly gamma rays. It was the steady decline of patients who had at first seemed to promise recovery from burns and other injuries, which should not have proved fatal, that posed the major mystery and problem for the medical personnel in the bombed cities.

The treatment of radiation sickness which produced the most satisfactory results was published by Professor Tsuzuki, of the Tokyo Imperial University. He recommended transfusions of plasma to combat shock and to maintain the fluid balance of the body, transfusions of whole blood (one pint per patient every alternate day for six weeks), injections of liver preparations in cases of anaemia, injections of Vitamin C and the addition to the diet of foods rich in this vitamin and the administration of the appropriate drugs to counteract the reduced clotting power of the blood.

It was estimated that the radius at which all unprotected people received a fatal dose of radiation from

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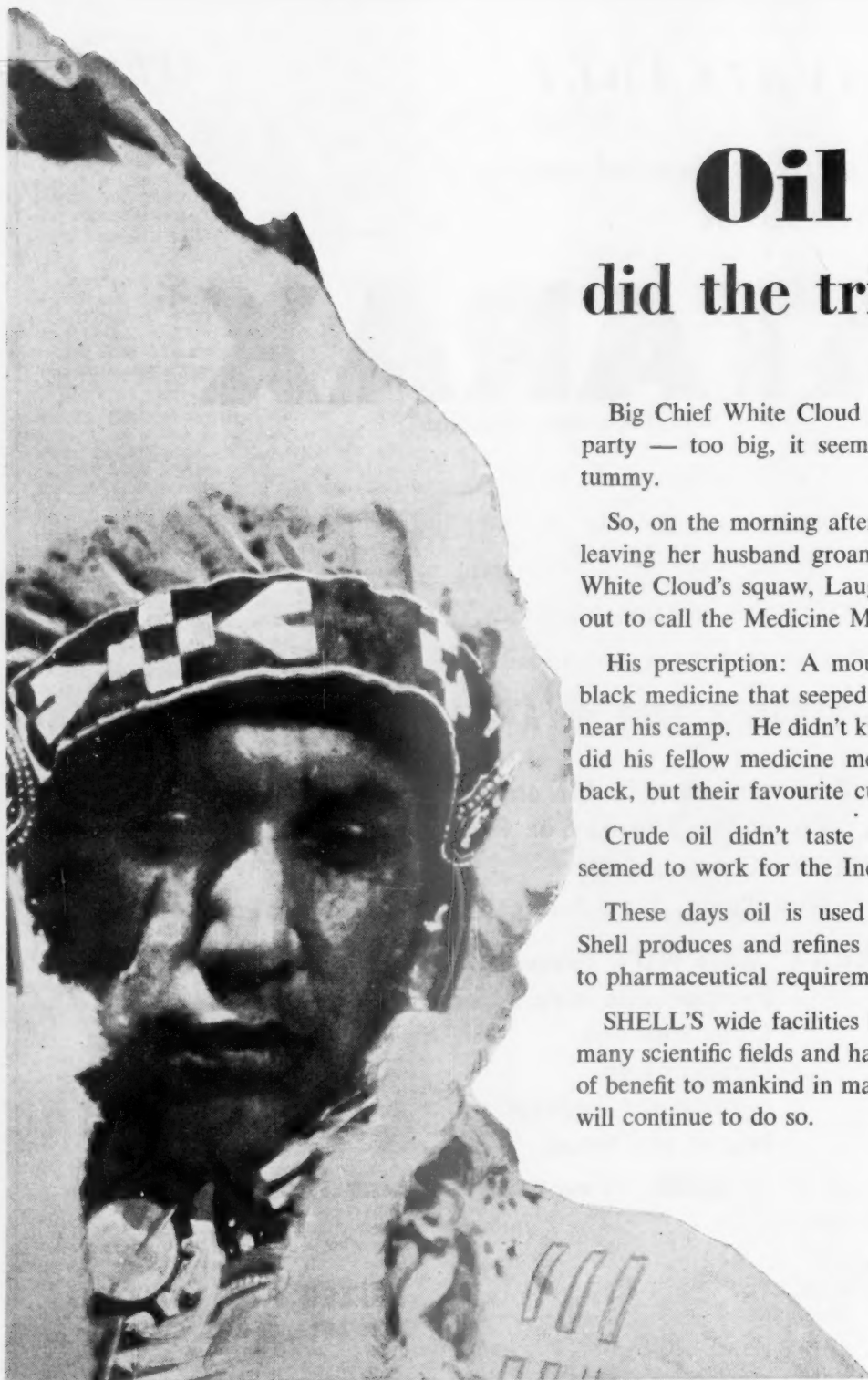
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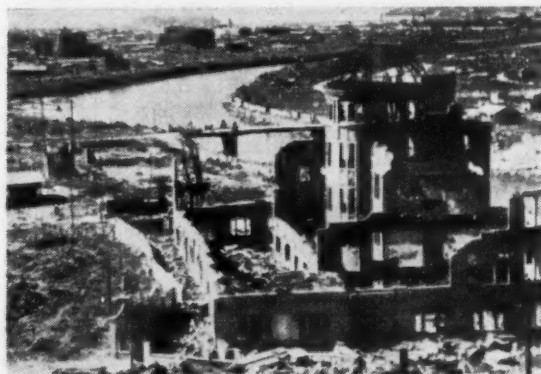


Shell Serves Australia

354/C

gamma rays was about half a mile, whilst there was only a 50 per cent. chance of survival for unprotected people at a distance of three-quarters of a mile. It was also learned that the gamma rays were capable of penetrating considerable thicknesses of building materials. Thus many people who were protected by buildings and hence were not burned or injured by blast still developed radiation sickness and died.

The atomic bombs released over both Japanese cities were exploded at an altitude of several hundred feet and as a result the radioactive cloud of fission products was dispersed into the atmosphere within a few days. Had the bombs been exploded at ground level, however,



The ruins of the Hiroshima Museum of Science and Industry, one of the city's pre-war showplaces.

the area of high contamination would have been far greater, and far more disastrous results would have been experienced. Probably the whole area would have been rendered uninhabitable for a considerable period. As it was many survivors recalled that on the day of the bombing of Hiroshima scanty rain fell over the city in huge, dirty droplets laden with radioactive dust. This radioactive fall-out contaminated water supplies and added one more particular hazard.

Altogether 78,150 people perished immediately or as a result of fatal injuries in Hiroshima; there were a further 69,000 casualties, of which 34,000 suffered severe burns; another 13,983 missing persons were never accounted for, making a total of over 161,000 dead, injured and

missing. The homes of a quarter of a million people were totally destroyed (from the 1946 Report of the British Scientific Missions to Hiroshima and Nagasaki).

It must be remembered that a great deal of research and development has taken place in the matter of atomic weapons in the past decade, and the Hydrogen Bomb is known to be one thousand times as efficient as the atomic bombs used at Hiroshima and Nagasaki. The radius of major damage and of lethal radiation from such a bomb would therefore be ten times greater than that just described. Nevertheless, the havoc and human suffering occasioned by the atomic bombs at Hiroshima and Nagasaki afford us with a preview of what can be expected in any future atomic attack, although it will be on a much larger scale.

The Challenge of the Atomic Bomb

The development of the atomic bomb for destructive purposes makes its challenge to all peoples—the challenge to be prepared. From past experience it is obvious that the problems of defence against this weapon are of particular concern to every section and member of the community, because when such an attack does eventuate everybody will be concerned, and it will then be too late to begin laying plans and organising defence measures.

It is therefore clearly the duty of every individual to play his or her part wholeheartedly in whatever community endeavours are initiated towards the goal of national preparedness, whilst there is yet time. Such a state of preparedness was precisely what was lacking at Hiroshima and Nagasaki, because the need had never been anticipated. Now that we are fully aware of the possibility and the implications of atomic attack, unpreparedness can only be described as unforgivable; in fact, criminal. Individual or community indifference is the attitude which must be avoided at all costs, and planning for national disaster must not be postponed because it seems remote.

At Hiroshima and Nagasaki handfuls of doctors, nurses and hospital pharmacists carried on in shattered buildings and makeshift quarters for weeks on end. Without accurate knowledge of the symptoms facing them—frequently left entirely to their own devices—with pathetically meagre and rapidly dwindling medical supplies—and with no co-ordinated plan to assist them—they strove to give treatment to the disorganised hordes of pain-crazed humanity who daily threatened to engulf them.

One day the people of some Australian city may find themselves blindly groping their tortured way through similar scenes of destruction and despair under the shadow of another mushroom cloud. Let a programme of civil defence be set up, and if it is never required, then we can be grateful rather than disappointed, for at least we will have been prepared.

In the United States of America, especially, civil defence and disaster plans for use in the event of atomic attack are already well advanced. There the relevant authority, the United States Federal Civil Defence Administration (U.S.F.C.D.A.), has endeavoured to implement uniform plans which will enable individual communities to be ready to meet the problems of a purely local disaster, but which will also permit mutual support between communities with maximum speed, efficiency and economy in the event of any one centre requiring assistance from outside as a result of a major disaster.

U.S.F.C.D.A. Publication 410, dated June 7, 1954, stated: "The destructive capabilities of nuclear and other weapons are so great that any attack, if successful, would result in damage and casualties far beyond the resources of any city. It is therefore

assumed that any city attacked would require assistance from the outside to meet the emergency. Such support must be organised in advance of an attack in order to be available immediately."

In major American cities and towns atomic bomb tests are held by local civil defence authorities at frequent intervals. Much publicity is given to these tests, especially through the medium of the press, radio and television, in order to educate the civilian population as to what to expect, but most importantly, what to do in the event of attack. Civil defence teams receive up-to-date specialised instruction from experts in nuclear defence to prepare them to deal competently with an emergency.

A variety of specialist equipment has been evolved to assist in civil defence. One direct-reading survey instrument, produced for personal use, is designed to detect visually the presence and direction of the source of harmful radiations resulting from atomic bomb explosions. The user sweeps the horizon with the instrument held to one eye, and harmful radioactivity is detected and revealed within the instrument as a noticeable lighting effect. Once the source is determined the civil population can be evacuated to a radiation-free area.

Similar in shape and size to an ordinary lampshade is another instrument which enables officials to determine quickly and accurately the position of the blast in the event of atomic attack. This information is of vital importance if rescue teams are to carry out their duties with maximum efficiency, since the means of communication would probably be destroyed. A number of these instruments are set up permanently in the open around a possible attack area. The radiations from an atomic explosion scorch a special paint on the interior of the instrument, but a brass rod in the centre casts a permanent shadow on the scorched area by blocking radiations. By means of grid lines this shadow then plots the direction and height of the blast.

Mobile nuclear laboratories have also been built for civil defence in many major American cities. These units will be able to speed technicians to the scene of an attack where the presence and degree of radioactivity can be determined immediately.



Complete destruction near the hypocentre.

In a lecture delivered at Stawell Hall, Melbourne, on May 24, 1955, Major-General F. Kingsley Norris, Director-General of Medical Services, stated Australia's position in regard to atomic attack most clearly when he said, in part:

"... a great deal is known of the effects of the most powerful atomic weapons, also of the means of minimising their effects. This knowledge is not secret and should be made available to everyone. Every responsible member of the community should be trained adequately in first aid. Simple, standardised treatment of injuries and burns should be taught in all medical and nursing schools. Plans should be prepared to meet the inevitable destruction that would occur, involving loss of medical and nursing lives, hospitals and medical equipment, communications and transport..."

In the absence of any national scheme, no Australian community is justified in delaying the preparation of simple, local plans, which may be studied and understood by all concerned, and which can easily be adjusted to any future national pattern. It is important that such planning be kept as simple as possible, because under the stress of a modern atomic attack the simpler the plans, the more certain will be their success.

The administration by which civil defence can become an efficient organisation will require a great deal of



Scene of chaos at Meijuki-bashi one hour after the explosion.

(Photograph by courtesy of the Broadwater Press Ltd.)

forethought, careful planning, prolonged training and frequent testing. These plans will naturally include the provision of training in Hygiene and Sanitation (both of which will be essential factors in post-atomic attack reconstruction), First Aid and Home Nursing, the establishment of Rescue Groups (included in which will be Stretcher-Bearing Squads, Ambulance Teams and Medical Personnel Carrying Services), and in the formation of Blood Donor Groups (since the large quantities of whole blood required would constitute a drastic drain on existing blood bank reserves).

All these precautions will require the fullest measure of co-operation from every individual and every profession to produce a practical and co-ordinated system of civil defence. The most critical test will lie in the degree of co-operation and performance by those personnel in key positions, and above all else in the quality of leadership available.

The individual pharmaceutical chemist, with his specialised knowledge and training, must be prepared to make his contribution to national preparedness. Only by such concerted effort may the effects of atomic attack be minimised and those facilities and services which are essential to civil life be restored and maintained.

(To be continued)

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SUMMARY OF SENSIBLE BEHAVIOUR IN SURPRISE NUCLEAR ATTACKS

By Alan Brooksbank

(Mr. Brooksbank's other articles on Civil Defence have appeared in our issues in 1936, 1938,
and February, April and August, 1955)

Section A. No Official Warning Given

Basis.—Learn how to take advantage of two scientific facts, namely:—

1. That as light travels more speedily than blast it gives an **indestructible, irreducible minimum warning period of from 16 to 90 seconds warning in the near-miss area** of the explosion of a size 500 N nuclear missile.
2. That the period of exposure to heat rays can be reduced by as much as 75% and the severity of the burns can be diminished.

This article is founded upon the data sheet for planning appearing in the British Official "Nuclear Weapons, 1956," and the blast speeds given by Professor Titterton in his admirable book "Facing the Atomic Future." A table, extracted from the American Federal Civil Defence Administration's 1953 annual report, is included so that distances and times can be scaled down to be applicable to cities smaller than Sydney and Melbourne. The British standard 500 N missile is adopted until the scaling down table is reached.

Unalterable Speed Data

Light and nuclear heat rays travel at 186,000 miles per second.

Blast waves travel at diminishing speeds, approximately 1st mile in 3 seconds, 2 miles in 7 seconds, 3 miles in 11½ seconds, 4 miles in 16 seconds, and 20 miles in longer than 90 seconds.

Sound travels uniformly at 1100 feet per second at sea level; call it 1 mile in 5 seconds, 4 miles in 20 seconds, 20 miles in 100 seconds. The noise of the explosion can be helpful as a signal that the danger from heat rays has passed and that the danger from debris is climbing to its peak.

Light Flash Warning

It is not necessary to be looking in the direction of lightning to become aware that it has flashed. It is imperative not to look directly at the flash of a nuclear explosion, because the light (by night or day) is so intense that it can cause blindness.

The flash gives warning of the danger of blast, debris and fire and subsequent fallout.

Direct Hit Zone, 0-4 Miles. Warning Period, 0-16 Seconds.

Occupants of zone may have time to say one short prayer after becoming aware of the brilliant flash of light.

Near Miss Areas, 4-20 Miles. Warning Period, 16-90 Seconds.

A. Persons in Suburban Residences with no Prepared Shelter.

(i) Immediately they become aware of a bright flash and possibly feel intense heat, note the general direction of its source and go into the strongest room of the house that is nearest to the flash;

(ii) Keep away from windows; sit down, preferably under a table;

(iii) Place head between knees, cover head and neck with arms and keep mouth open;

(iv) Remain there until half a minute after the sound of the explosion reaches them; and

(v) Search premises and grounds for flames, and deal with them.

Explanation.—Nuclear explosions last long enough to blow over chimneys, houses, electricity and telephone poles, etc., in the direction away from the source and not towards the source as high explosives may do by subsequent suction.

Rescuers would have debris from only one wall to shift, and, moreover, would not have to search ruins of whole house.

Table should protect against falling rafters from ceiling and roof, and the arms should protect the more vital head and neck from chunks of plaster, etc.

Keeping the mouth open until blast wave has passed (determined by hearing the noise of the explosion) permits equalisation of pressure on each side of eardrums and reduces danger of injury to them.

Delay getting up because glass tiles, sheets of iron and other items of debris are at rest until blast dislodges them, and they take some length of time "to get a move on" and finally come to rest.

Wood will be charred, paint blistered, etc., by the

heat rays, but many potential suburban fires will be extinguished by the later arrival of blast—like blowing out a match. Look for flames.

B. Persons in Office Buildings, Factories, Shops, etc.

The same principles for householders apply, but, in addition, keep well away from boilers, stacks of heavy goods and the like. Sit below level of tables, counters, work benches, etc.

C. Drivers of Motor-cars, Vehicles, Etc.

If car is travelling, driver has 16 or more seconds to stop at a site where tail electricity, telephone and/or tramway poles will not fall across the car—fall in the direction outwards from the source of the explosion.

In Australia, tall buildings are rarely continuous from the four-mile radius and beyond—select a site well clear of a tall building.

Pull into a gutter, leave brakes off, have fire extinguisher handy.

Explanation.—There is a probability that exposed portions of many drivers' skins (hands, neck, face, etc.) will already be scorched by flashburn from heat rays, which travel at same speed as light. If this be not enough to impair their skill as drivers, the sights they will presently see may distract their attention. A car at rest in a gutter is less dangerous than one travelling under power temporarily out of control.

Leave brakes off on the proven principle that concrete shelters resting on a base across which they can slide have remained undamaged when nearby stronger shelters, made integral with their foundations, have been badly damaged.

Persons Walking Along Suburban Streets, Working in Open, Etc.

Many will sustain burns by flashburn (heat rays) which would continue to assail them for as long as 20 seconds. These rays travel in a straight line and will not penetrate two thicknesses of white newspaper; getting behind any object intervening between their source and the person will give protection for the remaining seconds.

The next problem is to avoid further injury by glass splinters and other forms of flying debris, but not from metal fragments from bomb casings, as was the case with high explosive bombs in World War II. The casings of nuclear missiles will have been pulverised into fine dust, impregnated with radioactivity and hurled so high in the air that they will not commence to fall in the near-miss area for some hours—eight hours in one test explosion.

Local situations can vary so much that it is unwise to be dogmatic, but in general it would be better to select a position (in the limited time available) well clear from glass windows, out of range of falling electric light and telephone poles, remembering that they will fall outwards from the source of blast.

Some authorities say "sit down"; the writer prefers to "lie down"; a gutter or shallow depression will give more protection to a person at full length than another sitting up.

Lie down and cover neck with one arm and rest face on other arm, to diminish earthquake shock. Boxers, including those speaking from memory, are agreed that the point of the jaw is more vulnerable.

Keep mouth open to equalise blast pressure on eardrums.

No authority recommends people to remain standing, because a bigger target is being offered to blast, and standing people are more liable to get panicky and rush blindly about.

The domestic cat's instinct to run first and look afterwards does not apply to danger from nuclear missiles.

Scaling Down Table for Smaller Cities

The presumption is that the enemy will use the appropriate size of a nuclear missile to damage every building in the city with an overlap of, say, half a mile.

The figures below, except 500 N, are taken from the American Federal Civil Defence Administration's 1953 Annual Report to the President of the United States, and apply to "fission" missiles. Smaller quantities of "fusion" warheads would achieve the same results but would have the same measuring system. The missiles used against Hiroshima and Nagasaki are classified as "1 N" by British authorities and "1 X" by American authorities, and the British authorities now regard the size 500 N as the measuring standard in the same way as they treated the 500-pound-weight trinitrotoluene bomb (T.N.T.) as standard in World War II.

Table for Heat, Blast and Direct Radioactive Rays—Excluding Fallout

Missile Size	Direct Hit Zone in Miles Radii	Near-miss Areas in Miles Radii
1 N	Zero to $\frac{1}{4}$ mile	$\frac{1}{2}$ mile to 2 miles
10 N	Zero 1.1 miles	1.1 miles to 4.3 miles
25 N	Zero 1.5 miles	1.5 miles to 5.9 miles
50 N	Zero 1.8 miles	1.8 miles to 7.4 miles
500 N	Zero 3.5 miles	3.5 miles to 20.0 miles

No one, not even the enemy, knows precisely where the missile will explode; but, as civil defence is concerned with saving the greatest number, the assumption has to be made that the missile will explode at the site of the greatest concentration of people, namely, the business and shopping centre of the city. If it does fall a few miles "off target," a lesser number will be endangered.

It can be assumed that a 500 N missile would be used against Sydney or Melbourne; a size 50 N against any city whose suburbs extend out for $7\frac{1}{2}$ miles, and a 10 N where suburbs reach out for $4\frac{1}{2}$ miles, and size 1 N for smaller cities like Hiroshima and Nagasaki.

Persons in the direct hit zone have no hope of surviving the combined assault of heat, blast and direct radioactive rays, but, excluding fallout, the zone is about 6% of the area endangered and less than 1 per cent if fallout be included.

Scaling down the figures for a 25 N missile, persons located outside the direct hit zone would have from 5 seconds to 25 seconds to follow the rules of sensible behaviour in cities where no warning was given and no precautions had been taken by themselves or by the authorities.

Fallout.—Any surviving form of shelter that would exclude driving rain would also exclude fallout dropping on to the skin. But gamma rays, emanating from particles of dust so tiny as to be invisible, can penetrate 3 inches of concrete with a loss of 50% of their efficiency and 6 inches with a reduction of their power of 75%. That is, they can be injurious but probably not lethal.

Their presence can be detected only by trained personnel, taking readings from one or more of the several kinds of radiac meters. In 1956 Canada placed orders for 300,000 dosimeters, and United States orders exceeded 1,000,000 dosimeters. Dosimeters have been made in Sydney by Australian technicians.

Sensible behaviour within and beyond the near-miss area is to take shelter from fallout some hours after the explosion and remain there until trained personnel, having taken readings from the meters, advise that it is safe to come out.

Persons fighting fires would be safe from fallout, because the upward currents of hot air would prevent it from falling on to them.

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Photography and Pharmacy

(Part One)

By Jack Cato, F.R.P.S.

For nearly one hundred and thirty years photography and pharmacy have been close, intimate companions, for photography is a process of chemistry. Today most of its chemistry is handled by big business, so that we go to the local chemist or camera store for a bottle of this or a box of that.

But in my young days we did all that chemistry ourselves. We made up our solutions from our own secret formulas; we coated our own plates and sensitised our own papers, very occasionally committing the serious crime of destroying the currency by throwing a handful of sovereigns into the nitric and hydrochloric acids for our toning solution (half-sovereigns made in Perth, W.A., were the best). We made our silver nitrate in a similar manner, and we saved all the used solutions, the scrap, trimmings and spoiled prints, extracted the metals and used them over and over again.

In those days, we used a wet plate that had a life of about three minutes, though we were learning to keep it damp and active for nearly a quarter of an hour by adding beer to the emulsion. So every day the boy (who was me) went to the bottle department of the pub and the pharmacy for the necessary ingredients. Many photographers then wore red noses and some of them were beauties, for at sixpence a quart, there was always a lot of beer left over to steady the operator's nerves after a day spent taking fractious children at "time" exposures. Some operators went to the Pot. Bromide bottle for the same purpose, but then it took a lot of brandy to keep them awake. So you see that the happy association of our two professions is filled with the most pleasant memories.

We used cyanide then for fixing the image, buying it in large sacks, and breaking the lumps with a hammer upon the same table from which we ate our lunches. No one was ever poisoned, not even the rats which were common in most city premises.

I am speaking of the Gay Nineties of the last century. Gay for the rich, despite the bank smashes, and gay for me, who, having nothing to lose, counted every gain a blessing. At that time the wet plate was already outmoded by a few years, but in my cousin John Beattie's famous studio we still used it, for most of our work consisted in making lantern slides of the beautiful scenery of Tasmania. These were sent to all parts of the world for the magic lantern shows which then took the place of the modern movies, and because few towns had electric light, the wet plate slides, when lit by oil lamps, gave far more brilliant pictures on the screen than did the new dry plates.

So I was nurtured in the primitive process of the wet plate which for over thirty-five years formed the dark ages of photography—when the camera was chained to a dark-room and any outside assignment—a landscape,

Mr. Cato has spent a colourful life with pen and camera. As a writer he is best known by his autobiography "I Can Take It," his "Pictorial Study of Melbourne," and "The Story of the Camera in Australia," to which he devoted many years' full-time research. But there are also volumes of his Lectures, Stories, Letters and Technical Articles on the Art and the Chemistry of Photography. In the programme just issued for the Moomba Book Fair at the Melbourne Town Hall, March 2, 1957, his lecture has this introduction: "Mr. Jack Cato, whose books have been among the most popular pictorial records of the nation."

a church, a family group on the lawn—was worked from a black tent or the dark interior of a caravan which contained all the chemicals, the barrels of distilled water, and the paraphernalia for sensitising and developing the plates on the spot.

This was the problem, one that puzzled and confounded thousands of chemists, scientists and photographers through all that long period. Firstly, we had to get Nitrate of Silver—of all chemicals the one basically most sensitive to light, when in contact with some organic substance. Kept as fluid in a glass bottle it remains colourless as water, but dip a finger or a piece



The squatter comes to town for his portrait. Life on his farm was lonely, so he came often for conviviality in the hundreds of taverns that catered for his needs. This is a picture by Douglas Kilburn, Melbourne's first established photographer, who became "the squatters' photographer."

of paper in it, hold it to the light, and it turns black in a minute. The silver has returned to its metallic state and because light does that to silver, we have the magic of photography where the image, the finished picture, is a thin veneer of metallic silver.

To make our silver nitrate we dissolved a hunk of metallic silver in a beaker of nitric acid over the flame of a bunsen burner, and when the metal was dissolved, simmered the solution until it was all evaporated, leaving the silver-nitrate at the bottom of the beaker in the form of flat, transparent crystals.

Every morning we coated our glass plates with a thick emulsion of collodion (which looked like pea soup), the organic substance made from cotton which was to hold the silver nitrate to the glass. The collodion quickly dried, and when a sitter arrived we dissolved a few silver crystals in a dish of water in the dark-room, immersed one of the coated plates in it for a minute, put it wet into the camera slide, exposed it in the camera for four or five seconds, then returned it to the dark-room and developed it immediately. For as it dried (or as the water evaporated from it) by a tantalising law of nature, the crystals returned once again to their natural state, forming a pattern like hoar-frost on a window pane all over the plate, and so the picture was lost.

After thirty years of that sort of frustrating tomfoolery, an English doctor named Maddox made up a dish of dissolved gelatine, stirred some fluid nitrate of silver into it, and let it set. When the gelatine was hard, he cut it into strips and washed them for an hour. Later he boiled the strips in a kettle, and when still warm coated the emulsion on some plates. Because he had washed all the surplus silver from the gelatine, the plates dried without crystallising. He exposed some in his camera and found they were perfect—and ten times

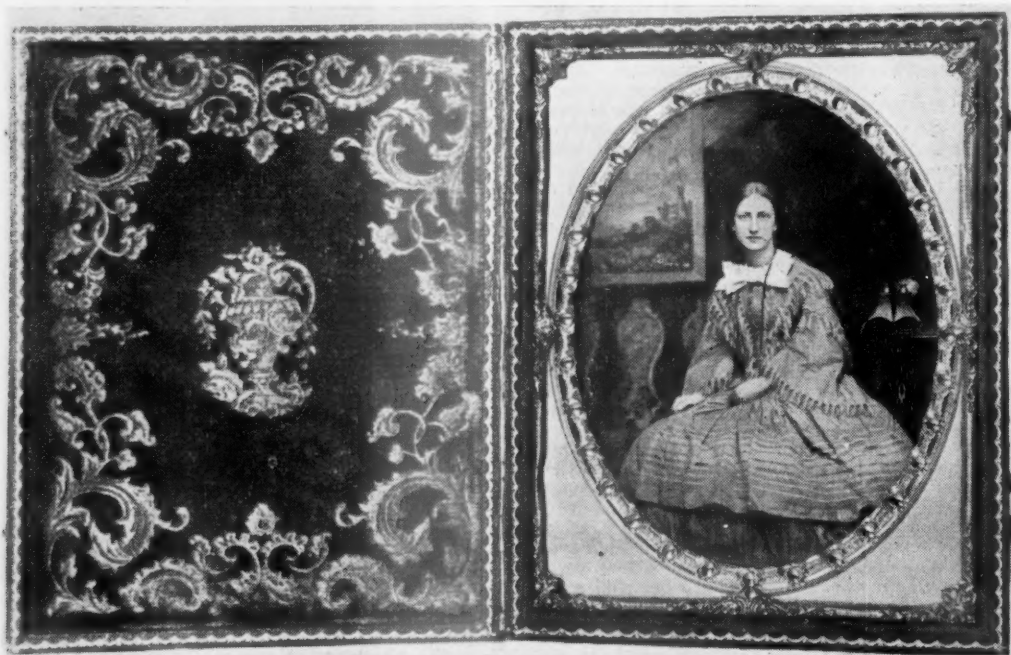
as fast as the wet plates. He kept some for a year and found them still good. So he told the world.

Thus was discovered the dry plate, and also speed photography, for nowadays when the manufacturers want to make a faster film, they coat the emulsion at higher and higher temperatures.

That's how modern photography was born.

In those days of the dark ages we also made our own cameras, which was not difficult, though they were not the pretty gadgets turned out nowadays in yearly models, to adorn tourists. Ours were as old as civilisation. The old Greeks knew the camera; the early Italians built them and called them "camera-obscuras" (as both words mean the same, we tossed one of them). Any race of men who sought daily siesta after the garlic and the wine, retired to a room and pulled down the blind, and millions of those blinds must—at some time—have developed a crack or a small hole through which the sun's rays poured on to a whitewashed interior wall, reflecting the outside landscape across it like a wide-screen colour film. For the siesta had been taken inside a camera-obscura; and hordes of sleepers—their eyes sensitised to the dark—must have awakened to the magic of its pictures. All they had to do was to widen the hole, put in a lens to brighten the image, and they had the camera-obscura "side-show" we used to pay to see at regattas and fairs.

From the fifteenth century the Italians were making camera-obscuras in the form of boxes about a foot square, and many famous artists used them as legitimate aids to drawing. They were the same kind of "cameras" all the famous photographers of the world use today—a black box with a lens at one end, and a sheet of ground glass at the other on which to view the image.



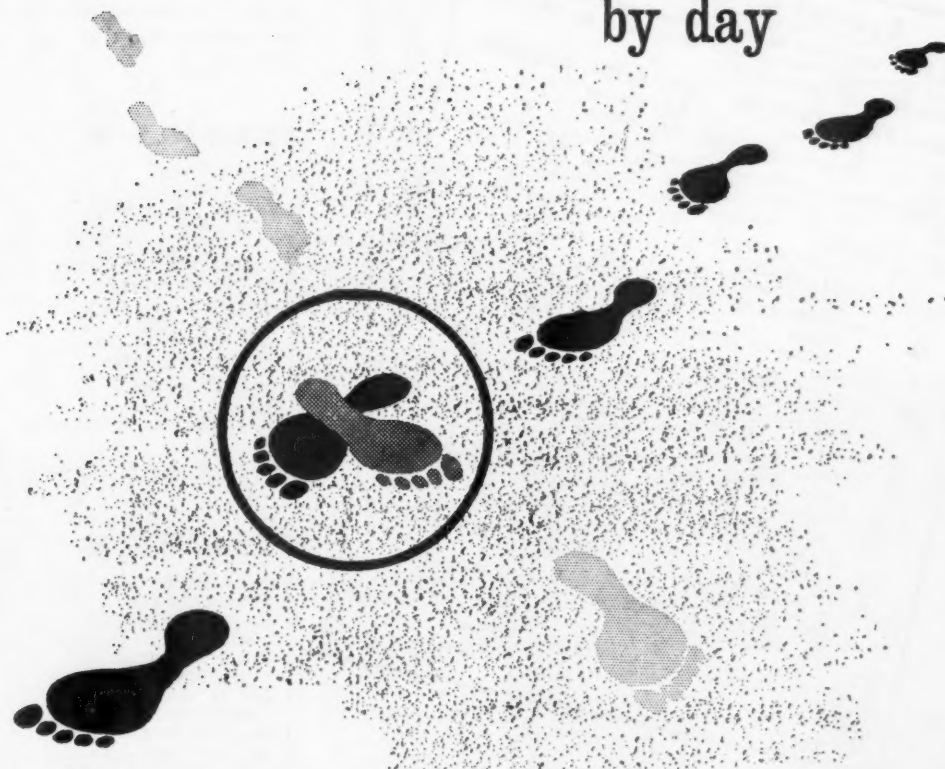
A portrait by Douglas Kilburn, of Melbourne, showing Miss Matilda Dean, at the age of 17 years, daughter of Mr. M. Dean, who came to Port Phillip with John Batman on his second voyage.

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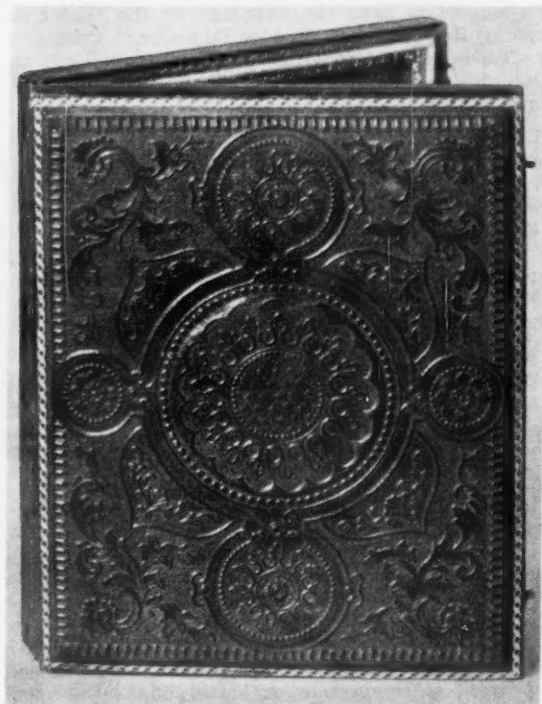
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1 doz. FORD PILLS — Large	2 14 0
3 doz FORD PILLS — Small	4 14 6
1/6 doz. MENTHOID CREME	12 9
1/6 doz. PRESSOR SALT	15 0
TOTAL	15 6 7
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The Daguerreotypes were set up in cases beautifully embossed in leather, the inside of patterned velvet, and the portrait surrounded by a gilt metal frame.

In manorial England one of these camera-obscuras was usually to be found resting on a table before a window overlooking a gentleman's estate, and ladies of leisure occupied their time drawing on the ground glass, pictures of Capability Brown's lovely landscape gardens. Chippendale designed them in rosewood and mahogany. Hepplewhite made them in inlaid woods.

Many of them were brought out to Australia. The Macarthurs had one at Camden. Sir Thomas Mitchell, the Surveyor-General, used one during the building of the road over the Blue Mountains, and with it made many drawings showing the progress of the convicts' work.

And an English gentleman named Henry Fox Talbot, squire of a large estate near Salisbury, had one which he used as an aid to drawing. For a long time his mind, like thousands of others, had been intrigued with the idea of "fixing" by some chemical means, the pictures shown in his magic box. He was a Member of Parliament in the House of Commons, a Member of the Royal Society, an amateur scientist, and a close friend of the great Michael Faraday, so his experiments were backed by some sound knowledge of chemistry.

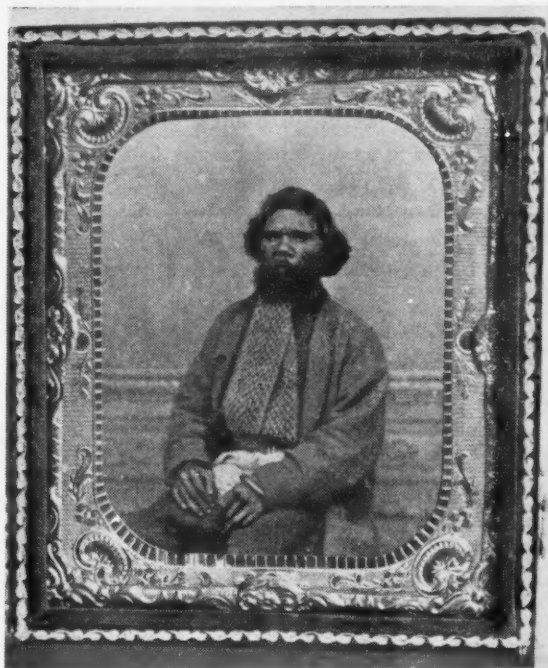
In 1835—the year that Melbourne was founded—Talbot soaked a sheet of paper in a solution of common salt and dried it, then in a room dimly lit by a distant candle, he brushed the paper over with a strong solution of nitrate of silver, forming, with the common salt, a surface of silver chloride. He placed the treated paper in his camera-obscura, pointed the lens at a window showing a distant landscape, and exposed it for an hour. When he withdrew his sensitised paper he found it now

contained a clear picture of the subject in negative. He fixed it in common salt, and made prints from it on similarly sensitised paper, waxed to make it semi-transparent. One of those prints from the original negative, is on view at the Melbourne museum.

That was the world's first photograph. The simplest experiment in chemistry (after many years of study) had created the wonder of the age. It was the foundation of all the photography in the world today, but Talbot saw no future in it. It was an amusing toy with which he made some charming groups of his friends ("Sun Pictures" he called them). Beyond that he took little interest in it.

In 1910 I joined the Royal Photographic Society in London. I was their youngest member; later, their youngest Fellow. And I soon got to know their oldest members. Many of them had known Fox Talbot, who had also been a member, and many of them had been to his home (almost an annual pilgrimage), where they had taken pictures of the same window out of which Talbot took the world's first photograph. I asked them why it was that Talbot kept his discovery a secret. They told me that he was the typical rich Englishman of his age—conservative, unimaginative, and self-effacing; hating show and publicity, and inclined to be a bit grumpy and forceful about it. Today we consider many of his early photographs are the classics of the camera. He thought so little of them that he left Michael Faraday to read the paper on his process before the Royal Institute, and he himself did not even attend the meeting.

Meanwhile a very different type of man—a handsome and popular French—was experimenting towards the same end, with such fierce, Gallic enthusiasm that his



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wife applied to have him examined by the Master in Lunacy. He was Louis Jacques Daguerre, a showman who conducted a large Hall of Varieties in Paris to exhibit his cyclorama, and where there were many side-shows, including a large camera-obscura.

Late one afternoon, Daguerre held a small polished plate of silver over fumes of iodine, producing a yellow surface of silver iodide. He put the plate in a little camera-obscura, pointed it on a Paris street, and gave it an exposure of ten minutes. As he was feeling tired, he then put the plate in a dark cupboard, intending to experiment further with it in the morning. By accident a saucer of mercury was on a lower shelf of the cupboard, and during the night the fumes settled on the plate, developing up a perfect image of the subject.

Daguerre fixed it in common salt. Wild with excitement he exposed his plates on hundreds of subjects, then sent invitations to all the savants of Europe, who flocked to Paris to see the world's first photographic salon.

In 1839, both Talbot and Daguerre published their processes to the world, holding patents in only a few countries. Daguerre's process was perfect from the first, and his was the photography used in all parts of the world for the next fifteen years. Daguerreotypes were simple to make, though in practice complicated by climate, temperature, light, atmosphere, etc. Within a few months of the published treatise, cameras and equipment were on sale in Paris and London, and Daguerre was giving lessons and selling rights to his patents.

In 1841, a pupil of Daguerre's travelled to Australia in a sailing ship bringing out a cargo of French wines. He gave public demonstrations of the Daguerreotype in Sydney (population 29,000). The Press said "his pictures are very beautiful miniatures."

At that time the pattern of Australia's first beginnings was still a living thing. All of it was photographed, and from that time the camera recorded our pioneers, our distinguished visitors, our streets and towns and settlements; so that it is true to say that our history was factually recorded by the camera practically from the first, placing our national story quite outside the usual myths and legends, and that never happened in the life of any other nation. Also those pictures are still preserved in our archives and historical treasures.

In 1842, George B. Goodman, a Londoner, came to Sydney with his Daguerreotype equipment, and stayed there for five years, travelling every State but Queensland and Western Australia. Melbourne then had approximately 12,000 people. Adelaide was five years old. Goodman was Australia's first professional photographer. He had bought his lessons and his rights from Daguerre, and he made a fortune here. During the eighteen-forties, he was followed by half a dozen other Daguerreotype men, whose work brought great profit to Australia, for it was the little picture of the chemist's shop, the streets, and the other business premises in the growing settlements, that were sent to London as proof of sound establishment, which brought more capital (lent by the family at home) and more stock from the wholesale houses in Britain to meet the growing demands of the expanding Colony.

(To be continued)

COLOUR PHOTOGRAPHY

An Address Delivered by Mr. J. O. Colahan
at a Meeting of the Discussion Group of the
Pharmaceutical Society of Victoria, 13/2/57

Most of us take it for granted that the release of Kodachrome in 1935 represented the birth of colour photography. This, however, is far from the truth. It was not the beginning, but merely a stage that had been reached when the chemistry of dyestuffs had sufficiently developed and the mechanical problems of accurately coating multilayer films had been overcome. It was the practical application at last of a principle discovered by a Frenchman named Hauron 75 years earlier. Hauron published a paper in 1862 which not only set out the principles of colour photography but forecast with uncanny accuracy the lines along which it would develop.

But even Hauron was not the first in the field. A year earlier, in 1861, which is almost 100 years ago and only about 20 years after the first true black and white photograph had been made, an English physicist named Maxwell projected the first colour transparency before members of the Royal Photographic Institute. History records that Maxwell was not particularly satisfied with his results, but it is rather interesting to note that Maxwell's original plates were found to 1939 and a colour print made from them. Considering the difficulties under which Maxwell worked, the result was surprisingly good.

Maxwell was a physicist who discovered many of the properties of light, and if we are to understand the principles of colour photography it is necessary that we also understand just how light is made up. If we stop and think for a minute, light is probably the most familiar thing in our lives. We experience it in the form of daylight, or so-called electric light, for some 16 or 18 hours in every 24. The elements or components of light in the form of colours are all about us, and yet it is one of the things which most of us know least about. I suppose it is true that 90% of us here know more about the theory of the atomic bomb, which, thank God, has never touched our lives, than we know about the theory of light, which we live with constantly. Not only do we understand very little about light ourselves, but we make it difficult for our children to understand because we still teach them at school facts about light, or colour, which are scientifically incorrect. Red, blue and yellow are not the three primary colours, as most of us were taught, and

if they were, colour photography as we know it would be impossible, because no mixture of those three colours will produce green.

Just briefly, I want to go back to the spectrum.

You are all familiar with the spectrum. It is merely white light split up into its various coloured components; the simplest example is the rainbow, or it can be produced in the laboratory by passing a beam of white light through a prism. If we examine the spectrum closely, we see that the various bands of colour are not sharply defined, but merge together, and for the most part are obviously a mixture of other colours. It is quite reasonable to suppose that all these mixtures, as well as white light, are composed or made up of two or three or four fundamental or true colours. This is quite easily proved. There are in fact just three primary colours or colour elements. They cannot themselves be made by mixtures of any other colours, but mixed together they give all other colours. The three primary colours are blue, green and red. A combination of two or all three of these colours in varying concentration will produce every known shade of colour, and a combination of all three in equal strength will produce white light.

The fact that they will produce white is fairly obvious when we consider the spectrum. Blue and green produce blue/green, or cyan, as it is called.

Red and blue produce magenta, which is a reddish purple.

Green and red produce yellow.

These three colours—yellow, magenta and cyan—which are produced by mixtures of the three primary colours, are called secondary colours. It is these three secondary colours which are inaccurately called red, blue and yellow by artists, and are incorrectly taught us as being primary colours. The reason for the confusion will, perhaps, become clearer when later we consider the properties of these secondary colours, because it is these colours and not the primaries which are used in most colour processes today.

But let's get back to 1861 and Maxwell. The subject for Maxwell's photograph was a tartan ribbon. The ribbon was photographed first through a red filter, the negative image was then converted to a positive image by the normal reversal process for black and white photography. This gave the red view of the subject in terms of a positive silver image. The process was then repeated on two other plates, through a green filter and then through a blue filter. These three images were then projected on to a screen by three projectors, through the same red, blue and green taking filters. When the images were made to coincide, the original colours were reproduced. This is the simplest example of the separation negative process which is still used in commercial colour photography today.

Shortly after Maxwell's experiment, our French friend Hauron, whose contribution to colour photography was on the theoretical side only, suggested that, instead of having three images, the same result could be obtained by taking a single image through a mosaic of tiny red, blue and green filters and then projecting this image through the same mosaic. This was first

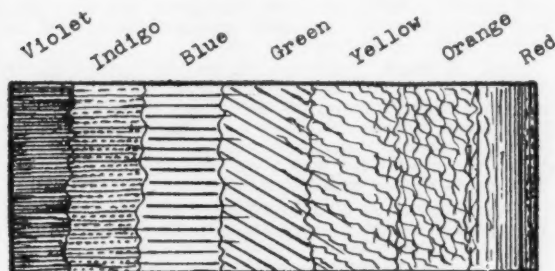


Illustration 1. The Spectrum

achieved by an Irishman named Joly in Dublin in 1895, and the way was now open for commercial colour plates.

The first commercial process came on the market in 1907. This was the French Autochrome process, developed by the Lumiere brothers. It is rather interesting to recall that the colour mosaic which was used consisted of grains of starch dyed blue, and green and red, and attached at random by varnish to the glass surface of the plate. Although the grains of the various colours were scattered indiscriminately, they were so tiny and there were so many thousands to the square inch that the result appeared homogeneous to the eye.

It was not until 1919 that Agfa first appeared on the colour scene with a similar plate to Lumiere's, but Agfa substituted dyed gum arabic for the starch grains.

The best-known and last of this type of colour plate

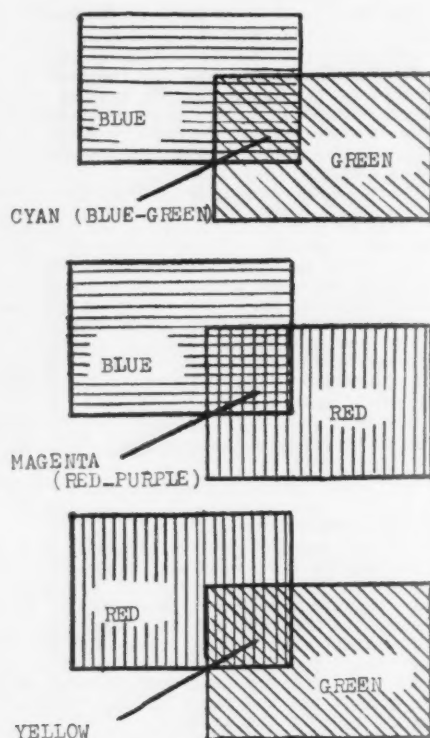


Illustration 2. Colour Combinations

or film is the British Dufaycolor. The mosaic used by Dufay is a triumph of mechanical printing; it consists of tiny blue and green squares enclosed by red lines; there are over one million colour elements to the square inch.

All these processes are known as additive colour processes, since they are based on the principle of mixing or adding on a screen, blue, green and red lights. The colour of the photograph obtained by these additive systems is quite good, since there is no difficulty in dyeing the mosaic the required shades of blue and green and red. Processing is also relatively simple; the colour mosaic is always there, and all that has to be done is to develop the plate to a negative and then convert the negative image to a positive.

However, the additive process has some serious drawbacks. For a start, a silver image is required. This, of course, means grain. Not only does the grain make

the projected picture appear unsharp but the grains of silver obstruct and absorb a quantity of the projected light. This made the picture look somewhat dull when viewed by reflected light and necessitates a very strong lamp for projection purposes. The mosaic is also a serious drawback, as it appeared as a pattern if the picture is projected to any size. Dufaycolor is still available in the United Kingdom, but generally speaking additive colour processes are now considered obsolete.

All colour films available today (exception, Infay) are based, not on an additive but on a subtractive principle. We saw that it was Hauron in 1862 who suggested that a colour mosaic be used in conjunction with a single positive image to produce a colour transparency. This genius, who I think we really must give pride of place as the father of colour photography, also stated in the same paper that a far better way to produce a colour photograph is to subtract the colours you don't want from the light used for viewing or projection, and thus leave the colours you do want. The colours not required can be subtracted from the white light simply by a clear layer of dyestuff of the correct shade, and no final silver image is necessary. The main advantage is straight away obvious from this; no silver image means no grain and consequently no absorption of light by the silver grains—therefore, a sharper and brighter picture.

What shade will these layers of dyestuff have to be? Well, we know that white light is made up of blue, green and red. To get blue from white, we have to subtract red and green. Red and green is yellow, therefore yellow must be one of the shades. To get green from white, we have to subtract blue and red; blue and red is magenta, which is the second shade; and to get red from white we have to subtract blue and green; blue and green is cyan, which is the third shade. As we saw earlier, yellow, magenta and cyan are the secondary colours, and we now see that they are also complementary to the primary colours. Let us consider for a moment an important property of primary and secondary colours. When white light is passed through a filter lay of a primary colour it transmits its own colour and absorbs the other two. When white light is passed through a secondary colour it transmits the two primary colours it is made up of and absorbs the other one, i.e., it absorbs its complementary primary. It is on this fact that each secondary colour absorbs its complementary primary that modern subtractive colour photography depends.

The only reason that colour photography did not develop immediately along the lines of this subtractive system was the difficulty in obtaining dyestuffs with the correct absorption or subtractive properties and the physical difficulties of making suitable plates or films. It was not until 45 years after Hauron showed the way that the Autochrome additive plate became available, but it took 73 years before Kodak and Agfa were able to overcome all the problems, and release subtractive colour film in 1935 and 1936.

Subtractive colour film can be considered a six-decker sandwich. The base; the anti-halo layer; the red sensitive emulsion layer; the green sensitive emulsion layer; the blue sensitive emulsion layer and the yellow filter layer.

Each of these emulsion layers is approximately 1/5000th in. thick. The anti-halo layer, of course, takes no part in the forming of the image; it is only there to prevent reflection of light from the base of the film and is dissolved during processing. The yellow filter layer, the reason for which we will explain later, also disappears during processing.

This illustration of a multi-layer film explains why the speed of colour films is limited. The speed is determined by the effective speed of the emulsion layer, which is next to the base of the film, i.e., the red sensitive layer. By the time the light has penetrated through the two top emulsions, and the yellow filter



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ELIXIR

Average dosage
for children

Years	Dose
Under 1 Year	5 mins.
1-2	10 mins.
2-3	15 mins.
3-4	20 mins.
4-7	30 mins.
7-14	40 mins.
14-20	50 mins.

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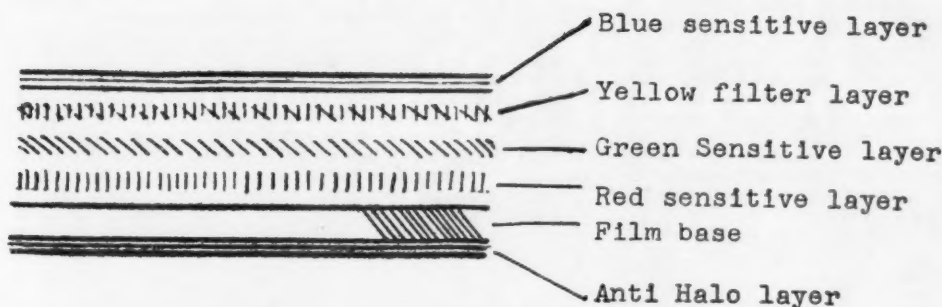


Illustration 3. Section through subtractive colour film

layer, it is considerably weakened, and only a relatively small percentage of the total light is left to expose the lowest emulsion layer. To preserve the colour balance, the two top layers must be slowed down deliberately until their speed matches that of the bottom layer. This is a typical example of the chain which is no stronger than its weakest link. For special technical purposes, where the correct rendering of the colours is not of prime importance, it is, of course, possible to manufacture colour films of greatly increased speed, and such films are actually produced.

When a photograph is taken, three silver images are formed—one in each of the three emulsion layers. During processing, the three silver images are bleached out, and we are left with a pure image in each layer, of yellow dye, magenta dye and cyan dye, which, when projected or viewed by transmitted light, gives a picture in the original colours of the subject. To see just how this comes about, let us consider first only the top emulsion layer. The blue component of the subject causes a latent image to form on this layer during the exposure. This image is developed to a negative; the density of the silver representing the proportion of blue in the subject.

This is now reversed to a positive image by purely photographic means of exposure to light and redevelopment. We now have a positive silver image in the layer, the density of the silver being inversely proportional to the amount of blue light in the subject.

A yellow dye is now formed in the layer by chemical means; proportional to the density of the positive silver image.

Top Emulsion Layer

The positive silver image is now bleached out.

The same applies for the green and red in the subject, except that magenta and cyan dye layers are formed in the other two emulsions. We can now see the reason for the yellow filter layer. Although the second emulsion layer is sensitive to green and the bottom layer is sensitive to red, they are both also sensitive to blue—it is impossible to make them otherwise. Therefore a yellow filter layer is used which will pass green and red but absorb the blue, which, after striking the top emulsion layer, is no longer required.

In actual fact, of course, the dye layers are formed at the same time as the

positive silver image is being developed. Once the dyes are formed, all the silver is bleached out and three layers of pure grain-free dye remain.

All modern colour films are of this six-decker sandwich type. However, with Kodachrome and Ilford colour the emulsion layers contain no dye

couplers. The dyestuff has to be introduced into each layer during processing by means of very elaborate equipment, and this is the reason why these films cannot be processed otherwise than by the manufacturers. All other colour films contain dye couplers in the emulsions; processing, therefore, is very much simpler and can be done by anyone using either the manufacturers' formulas or substitute formulas which work in the same way.

The yellow, magenta and cyan dyestuffs which are in use today are not yet perfect. The range available to manufacturers is fairly limited, because, other than colour absorption, certain other properties, such as light-fastness, and non-migratory characteristics are essential. Therefore, the final dyestuff chosen is always a compromise, and it explains why the colour-rendering varies slightly with different makes of film. Blue is the most difficult colour to render correctly; skies appear too vivid in all types of film. Yellow is usually satisfactory, and it is in the reds and greens that the greatest variations occur.

I am frequently asked which is the best colour film available. One is no better than another; they are all now extremely good, but they do have slightly different characteristics. My advice is to standardise on one make of film; get used to it, and learn how to expose it correctly under varying light conditions. Providing it is processed correctly, either by the manufacturer or by a reliable laboratory authorised by the manufacturer, and therefore using the official formula-

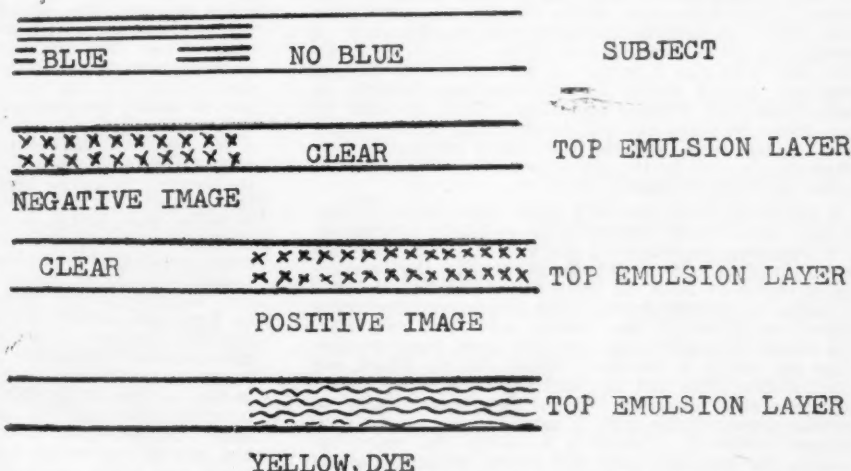


Illustration 4. Showing production of negative and positive images in top emulsion layer

tions—and this is very important—you will consistently get first-class results.

We will now project a number of slides taken on all the different types of colour film available in this country and also several types not yet available here. These photographs were mostly taken either by daylight or electronic flash, and no filters were used with the occasional exception of a clear ultra-violet. Only one or two artificial light photographs have been included, since the colour of this type of lighting varies very considerably, depending on whether flash bulb, tungsten or photo flood is used. I invite the audience to try and identify the make of film as each slide is shown. I believe that your inability to be able to do so is the best reply to those people who maintain that one particular film is better than another.

One point that I would like to mention is the use, or perhaps I should say misuse, of filters when exposing colour films. The only time a filter is essential is if a daylight-type film is to be exposed in artificial light or vice versa. Clear ultra-violet absorbing filters do give some improvement in colour rendition in photographs taken at the seaside or at high altitudes or on dull days, particularly in cameras with cheap lenses. However, good ultra-violet filters are extremely difficult to obtain (and cost between £3 and £4); most of those sold for £1 or so are little better than pieces of plain glass of extremely doubtful u/v absorbing properties. They are not coated and, being stuck out in front of the lens, achieve much the same result as taking a photograph through a window, which no one in his right mind would do. He would either open the window or go outside. If you feel you must use an ultra-violet filter, buy a square of ultra-violet absorbing gelatin, tape it to the rear element of your lens inside the camera and forget about it.

Some photographers also use a large range of so-called colour-correction filters. These are very pale blue, straw or salmon coloured, and are designed to change the colour temperature of the light striking the film, and thus give a colder or warmer effect. It is a relatively simple matter for the film manufacturer to make colder or warmer emulsions. The one that he does make he considers will please most of the people most of the time, and the advantage of any change which is achieved by the use of correction filters is only in the mind of the user.

A criticism which one very often hears raised in connection with colour photography is faulty processing. It is true that the colour of one film can vary from the next, but if done by a reliable laboratory the processing is rarely at fault, as there are a number of other variables to be considered. The first is manufacturing difficulties; although the utmost control is exercised, and tolerance is held to a very fine limit, films do vary from one batch to another. Other factors which can affect colour films are age and exposure to both heat and excessive humidity. Even the lenses used in various cameras have quite a large bearing on the final colours produced. Generally speaking, the more expensive the lens the truer and better colour definition it will give. A modern five or six element lens will produce much clearer colour than a cheaper three-element lens, even though both are bloomed. Non-bloomed lenses can produce quite different results

again, and, as an interesting experiment, I suggest that anyone interested should expose a colour film in a box camera some time, but please send a note of apology along with the film to the processing laboratory.

Most variation in colour is caused by differences in exposure and lighting angle.

What of the future of colour films which produce transparencies? We already have a very high standard of colour, and it is perhaps unreasonable to expect much improvement in this direction, although we might see a slight toning down of the colours. Some films are already tending this way.

Ansochrome and Ektachrome have already broken through the speed barrier of 8 or 10 Weston, which is average for most colour films. These films can be rated about two stops faster, and it is almost certain

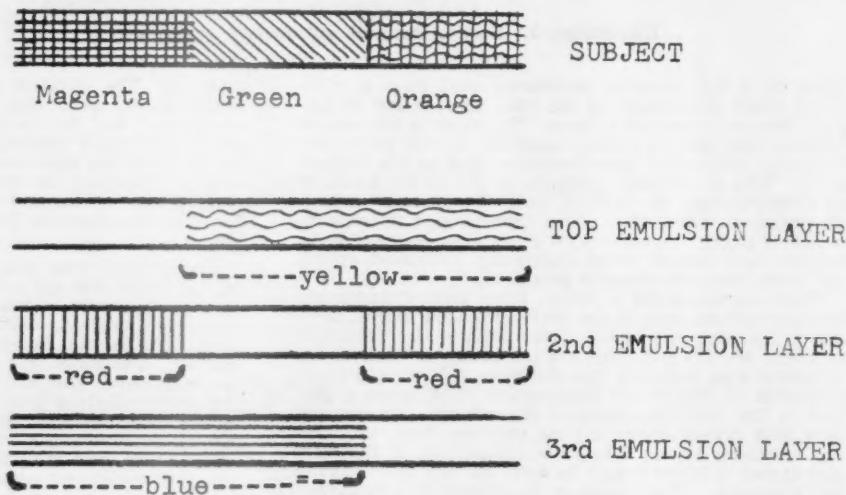


Illustration 5. Showing colour combinations in subject and effect on each emulsion layer

that big strides will be made in the near future in stepping up the speed of colour films, although they can never be as fast as black and white.

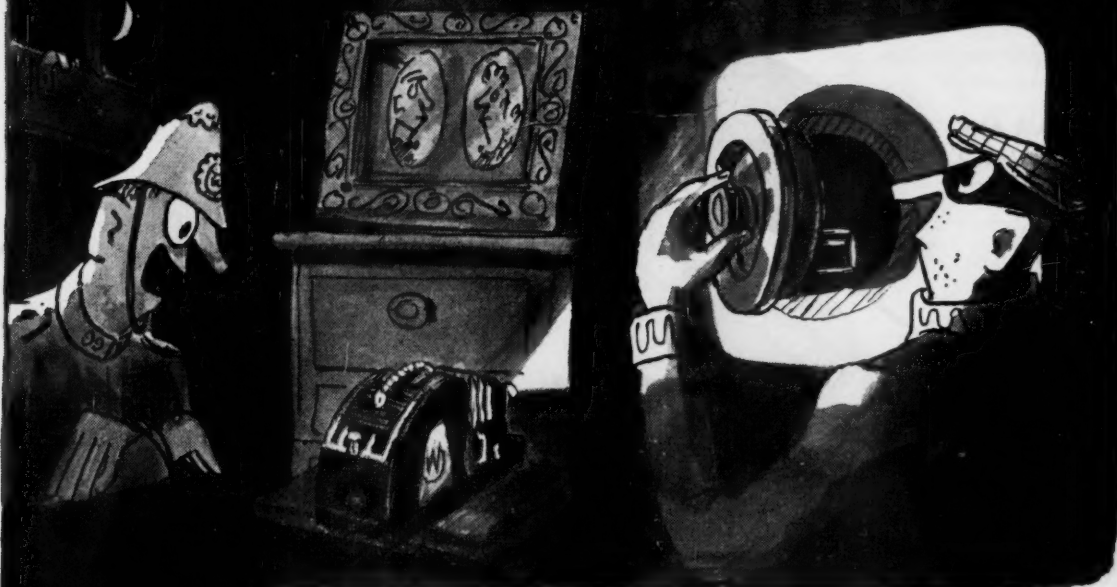
We can also expect an improvement in the exposure latitude of colour films. At the moment the limit is about half a stop either side of the optimum, but Telcolor reversal film, which we hope to release on the market here within the next twelve months, has a latitude of one stop and more either way, making colour photography almost foolproof. This latitude is at present obtained at the expense of some colour saturation, but no doubt the manufacturers will shortly overcome this problem.

We can also expect that processing will be considerably simplified and made easier for the amateur. At the present time, the official chemicals are available to the public only for Ferranicolor, but the substitute formulas worked out for the processing of other types of films will improve, and, no doubt, eventually the manufacturers will release some of their processing secrets. At the present time it takes two hours to process a Ferranicolor, although this can be cut to about an hour and a half if the solutions are fresh and the washing is skimmed. It is only a matter of time before the chemical problems are solved to enable the dye layers to be formed at the same time as the negative image is developed (Ilford). This would remove the need for reversing the image and halve the processing time. In fact, apart from a bleaching out of the silver, the processing would then be no different to normal black and white processing.

The colour photography horizon is continually widening, and the future holds many exciting prospects indeed.

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By

Geoff K. Treleaven, Ph.C., F.P.S.

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Cortisone acetate should not normally be administered topically except as eye drops and eye ointment.

HYDROCORTISONE (Acetate) (Compound F)

Equally efficacious by mouth, but is less readily absorbed by intramuscular route and appears to be temporarily effective when injected locally into a joint. In its local action it therefore differs from cortisone.

PREDNISONE—the delta analogue of cortisone, Δ^1 —dehydrocortisone formerly known as "Metacortandracin."

PREDNISOLONE—the delta analogue of hydrocortisone, Δ^1 —dehydrohydrocortisone formerly known as "Metacortandralone."

Prednisone and Prednisolone are stated to possess three to five times the therapeutic effectiveness of cortisone or hydrocortisone, while being markedly devoid of undesirable side effects, i.e., sodium retention and excessive potassium depletion.

FLUDROCORTISONE Acetate

9-alpha fluorohydrocortisone Acetate.

The anti-inflammatory action appears to be at least ten times that of cortisone or hydrocortisone. Because of its intense sodium retaining effect, fludrocortisone is mainly used topically.

DEOXYCORTONE ACETATE, B.P.

Deoxycorticosterone Acetate

Desoxycorticosterone Acetate

Deoxycortone Acetate is a constituent (steroid hormone) of suprarenal cortex extract, which controls the retention of sodium and excretion of potassium. It is chiefly used in the treatment of Addison's Disease as a partial replacement therapy.

Injection (Oily), B.P.
(intramuscular)

2 mg.

5 mg. and 10 mg.

5 mg./c.c., 5 c.c.

10 mg./c.c., 10 c.c.

Implants, B.P.

50 mg.

100 mg.

200 mg.

Desoxycorticosterone-Glucoside Injection (Water-soluble)

(intravenous), 5 mg. and 50 mg.

Desoxycorticosterone Trimethyl Acetate Injection, 25 mg. (Aqueous Suspension)

Intramuscular injection for prolonged effect.

Oral Tablets

1 mg.

5 mg.

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Decortisyl (Roussel); Meticorten (Schering Corp.); Delta Cortone (Merck); Di-Adreson (Organon); Delta Cortelan (Glaxo); D.H.A.

Codelcortone (Merck); Meticortelone (Schering Corp.); Delta Cortef (Upjohn); Deltastab (Boots); Delta Cortril (Pfizer); Deltahydrocortisone (Andrews); Di-Adreson-F (Organon); Deltisilone (D.H.A.).

Florinef (Squibb)—Lotion (0.1%) and Ointment (0.1%)
Fludrocortone (Merck)—Ointment (0.1%) and (0.25%);
Lotion (0.1%) and (0.25%).

D.O.C.A. (Organon)

Percorten (Ciba); Primocort (Schering); B.D.H.;

D.O.C.A. (Organon)

D.O.C.A. (Organon)

D.O.C.A. (Organon); Percorten (Ciba)

B.D.H.; D.O.C.A. (Organon)

BD.H.; Percorten (Ciba); D.O.C.A. (Organon); Primocort (Schering)

D.O.C.A. (Organon)

Percorten (Water-soluble)

Primocort, I.V. (Schering)

Percorten Crystules (Ciba)

Percorten Linguets (Ciba); Primocort (Schering);

D.O.C.A. (Organon)

Percorten Linguets (Ciba)

NEW PRODUCTS

The following new products which have come to the Editor's attention during the past month have been judged newsworthy, and are herein reported as news.

If the manufacturer or agent would like an illustration of his product to appear as part of this free reference, the block should not exceed the equivalent of 1½ in. square. The Journal will arrange production of the block if desired, and the only charge made will be for the cost of the block, and for any art work required if we have to work from an actual sample of the product. A photograph would be preferable.

Those wishing to avail themselves of this service are invited to send pithy information (with photograph or block) for use as opportunity offers at the Editor's discretion.

NYAL LIQUID SWEETENER

Nyal announces good news for all diabetics—a revolutionary sugar-substitute packed in a revolutionary container.

For some time now diabetics and others on weight-control diets have been offered artificial sweeteners, but only in tablet form. Now a LIQUID sweetener is available!

The new product — Nyal Liquid Sweetener — formulated from soluble saccharin, is packed in a new plastic squeeze pack, which holds 27 mls., and is fitted with a "Drip-Control" plug, enabling accurate dispensing. Nyal Liquid Sweetener is easier to use, easier to carry and leaves NO bitter aftertaste.

Available from all Nyal Centres; price 5/6 retail.

KODAK ANNOUNCES VERICHROME PAN FILM

Kodak Verichrome Film, which has ranked for years as the world's favourite snapshotting film, is going panchromatic. The new film is known as Kodak Verichrome Pan Film.

The new emulsion in Kodak Verichrome Pan is another result of entirely new emulsion-making techniques recently developed by Kodak. It retains the brilliance and wide latitude which endeared the previous Verichrome Film to snapshotters, but being of a panchromatic colour sensitivity now also reproduces all colours in their true black-and-white relationships. With the previous Verichrome, which had high sensitivity in the blue end of the spectrum, blue eyes or blue skies appeared somewhat lighter than normal, while the reds, as in the lips and flowers, were somewhat darker.

Verichrome Pan, it is claimed, provides sunny day snaps that are far more natural looking and permits better, brighter picture results on dull, cloudy days. Flash shots are also said to be better detailed.

The A.S.A. exposure index of the Verichrome Pan Film is 80 for day-

light. The tungsten light index is 64. The film's panchromatic sensitivity permits the use of deep orange and

red filters (which could not be used with the previous Verichrome) when it is desired to produce dramatic effects.

The original Verichrome Film introduced in 1931 replaced Kodak N.C. Film. It gave the amateur a better "success" average with the same basic box camera in which he had previously used N.C. Film. Verichrome was also about twice as fast as N.C. Film. This, plus its greater latitude, made it much easier for the amateur to get printable pictures whether he shot in the blinding glare of sunlight or under cloudy and overcast skies. As a result Kodak Verichrome Film has been a most successful and popular amateur snapshot film from 1931 until the present. It probably did as much to stimulate amateur interest in photography as did the development of the original Box Brownie camera.

According to Kodak, the new Verichrome Pan Film is expected to fill equally well the requirements of the casual snapshotter and the most discriminating expert. It is expected to prove a most useful film for general picture-taking opportunities. It fulfils every photographic requirement except those instances when the exceptionally high speed of Kodak Tri-X Film is required, or where the extremely fine grain and sharp image provided by the new Kodak Panatomic-X (35 mm. only) is necessary for very big enlargements.

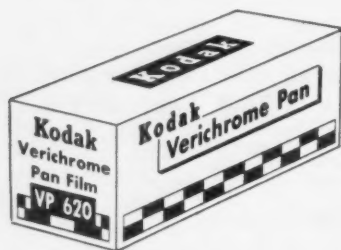
LOURNAY LAUNCHES NEW 24-HOUR LIPSTICK

Following the success in America and Europe of the new 24-hour lipstick (popularly referred to as the "Continental type"), Lournay has brought "Nite 'n' day" into the cosmetic field.



With its strong sales story, Nite 'n' day should be an instant success. The 24-hour lipstick comes in six fashionable shades in a very handsome engraved dome-top gold case, and the new switch-stick refills will keep customers coming back for more. Nite 'n' day is accompanied by a liquid rouge in a colour that will suit all types of skin and colouring. For easy handling, the bottle has a paddle attached to the cap.

To introduce this new line, Lournay has designed a Beauty Kit in a size that will slip conveniently into a handbag. The case is of transparent pink plastic, glittered with gold, and in its foil inset there is a full-size Nite 'n' day lipstick, a miniature liquid rouge and Lournay Beauty Touch, complete with puff. This will make an excellent travelling companion. Price 12/6.



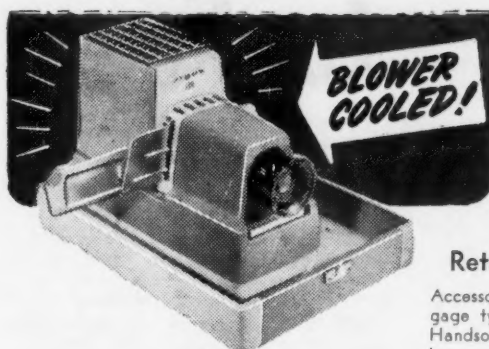
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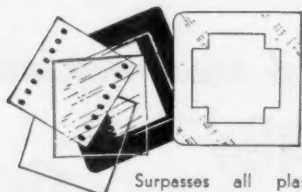
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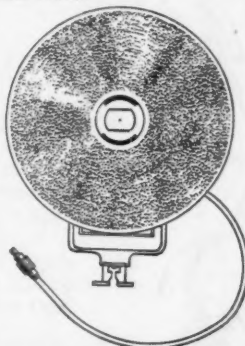


Surpasses all plastic mounts.

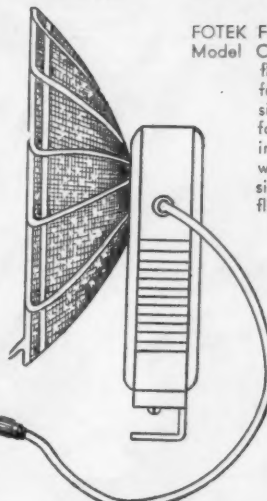
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FOTEK CAPACITOR FLASH GUN, Model A, has prolonged battery life, high intensity reflection. Takes small 22½v. capacitor battery. Universal bracket and connection lead, fits most cameras. Designed for latest capless flash bulbs.



Retail Price 38/-



FOTEK FOLDING FLASH GUN, Model C. A de-luxe capacitor flash gun with all the features of more expensive models. Fan-type folding reflector gives intense, but even light, without "hot spots." Designed for latest capless flash bulbs.



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These products are part of the large range of quality photographic materials now manufactured in Australia by Hanimex Pty. Ltd., 14 King Street, Sydney; 326 Flinders Lane, Melbourne; 76 Ann Street, Brisbane; 3 Francis Street, Adelaide; 935 Hay Street, Perth; St. James Theatre Building, Auckland, N.Z.



Let's talk turkey

If you want to gobble up the baby food business in your neighbourhood, there's one sure way to do it—feature the brand that MOTHERS HAVE LEARNED TO TRUST.

Every month more and more mothers are turning to Australia's biggest selling baby food—Heinz. By stocking the complete range of Heinz Baby Foods, Strained or Junior, you can take advantage of this ever-growing market. Your Heinz Salesman will gladly arrange a Baby Food department for your pharmacy, and will supply you with colourful point-of-sale material designed to increase impulse sales.

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NIVEA CREME — NEW PACK



The accompanying illustration depicts the new design of container for Nivea Creme. The pack has been redesigned in keeping with modern packaging trends, and it is felt by the manufacturer, Smith and Nephew (Aust.) Pty. Ltd., that a considerable improvement has resulted.

This product is stated to be enjoying steadily increasing popularity throughout Australia, and is backed up by extensive radio, magazine and newspaper advertising.

NYAL PEDIATRIC (CHILDREN'S) NASAL SPRAY

Now a nasal spray specifically formulated for children!

The Nyal Company recently announced the introduction of Nyal Pediatric (Children's) Nasal Spray — a product specially formulated from Phenylephrine Hydrochloride for children and packed in Nyal's all-plastic spray bottle.



Available from all Nyal Centres — price, 5/6 retail.

PHARMACY IN THE CONGO

Imports

Importers of pharmaceutical products in the Belgian Congo fall into two classes:

The Belgian Congo Government is probably the largest user of pharmaceuticals in the Belgian Congo, and relies entirely on foreign countries for its sources of supply. Tenders are issued twice yearly for the requirements of the whole Government medical services, and successful tenderers are nominated for each type of product. In tendering, United Kingdom manufacturers must adhere closely to the terms of the tender, and success depends largely on price. In the last few years United Kingdom manufacturers have been quite successful in this field, but some business has been lost by failure to observe the conditions of the tender.

There are few other importers of pharmaceuticals in the Congo. Some of the most important operating from Leopoldville are Cie Generale de Produits Chimiques et Pharmaceutiques du Congo, Ste Coloniale de Pharmacie et de Droguerie, Union Pharmaceutique Congolaise and Pharmacie Africaine.

At present the two former enjoy about 80 per cent. of the market in approximately equal shares. The first three importers have their own retail outlets and find their best market in selling large quantities of pharmaceuticals to large companies in the Congo who provide their employees with free medical attention. Under Congo law a free medical service exists for employees, whether African or European. Most private doctors have a contract with one or more Congo companies to treat its employees. These doctors prescribe medicines

which are then bought at retail stores, on account of the company.

Belgium is the greatest source of pharmaceuticals, but large quantities are also purchased from Germany, France, the United Kingdom and the United States. A large proportion of imports consists of branded, ready-to-sell products, as local doctors find it easier to prescribe a named product rather than to have a prescription made up. Prices of United Kingdom goods are not considered too high nor are there any widespread complaints of delivery, packing, etc. Indications are that United Kingdom products receive a good reception in the Congo and will probably do better in the future.

There are no quotas for imports of pharmaceutical products which enter duty free with the exception of quinine salts and medicaments containing 50 per cent. or more quinine which are subject to a duty of 25 per cent. ad valorem. Import licences are required for all imports, but are granted freely. Licences are issued either by the Economic Affairs Department of the Province, or in Leopoldville by the Economic Affairs Department of the Central Government.

Advertising

The use of patent medicines is becoming more and more widespread. Their sale is not regarded unfavourably by the medical authorities, so that more extensive use of them can be expected. All trade advertising literature should be printed in French. The Government Medical Services and importers are always interested to receive trade literature, but it is far easier to attract interest if it is written in French. English is understood widely, but there is no guarantee that prospective buyers will understand the language. Local advertising in newspapers, cinemas, etc., is not very good nor extensively used, and can probably be ignored for the most part. Display stands, on the other hand, are quite a useful means of sales promotion. Containers and labels should be printed in French and (if possible) Flemish, and any instructions to users should also be printed in these two languages. This is a common service of most Continental suppliers of pharmaceuticals. The commercial language of the Congo is French, but in printing containers or instruction leaflets Flemish should also be used if possible.

National Health

The numbers of practitioners in the Belgian Congo are as follows: Doctors 609, Dentists 36, Pharmacists 63, Veterinary Surgeons 86. The normal tropical diseases are all found in the Congo, but malaria has virtually disappeared from Leopoldville. The Congolese also suffer from tuberculosis, sleeping sickness and various venereal diseases.

There are various regulations affecting the importation and sale of medicines. These provide, among other things, for the control of pharmaceutical establishments and of sales by pharmacists, including special regulations relating to sales to the coloured population, for the use of the Belgian Pharmacopoeia, Edition IV, and of the metric system of weights and measures, for the sale of medicines, not specifically excepted from this regulation, to be confined to pharmacists and for the control of dangerous drugs and poisons, and for the importation of all medicaments into the Belgian Congo to be subject to the prior authorisation of the Belgian authorities. In Europe these authorisations are delivered by the Ministry of the Colonies through a doctor or pharmacist designated by the Head of that Department, and are valid through the Belgian Congo.

—From "The British and Overseas Pharmacist," October, 1956.

The Women's Section

Correspondent: Miss A. K. Anderson

Some of the State Associations are in the doldrums, and the Committee Executives are extremely worried at the lack of interest displayed by the members.

It is most disheartening to arrange meetings, with varied speakers, which members don't attend; and disappointing to feel that an Association is failing to hold its members together. It must be remembered that no group can function without each individual giving something to it—enthusiasm, interest, ideas and personal support.

I thought it might help the Associations affected if members from any State, who have ideas for something different to arouse interest for meetings, were to send their ideas to me—at 61 Park Street, Moonee Ponds, Victoria—and I will publish them on this page. Perhaps we could have some general discussion on the subject.

I consider it really important to Pharmacy for the Women's Associations to remain active. More women are qualifying each year, and their Associations, if strong and united, can do a great deal for the good of the profession.

THE WOMEN PHARMACEUTICAL CHEMISTS' ASSOCIATION OF VICTORIA

Instead of our general meeting in February, about 80 members and their friends attended a theatre party at the Princess Theatre, where they thoroughly enjoyed the fine acting of Agatha Christie's play, "Witness for the Prosecution," with its unusual and unexpected ending.

Our next meeting will be held at the College on **Thursday, March 7**, at 8 p.m., when the guest speaker will be Senior Policewoman Carr.

THE WOMEN PHARMACEUTICAL CHEMISTS' ASSOCIATION OF NEW SOUTH WALES

Our first meeting for 1957 was held on a hot, sultry February night at "Science House," where members packed the board room and overflowed into the corridors.

Mrs. Campbell presided and announced that the Victorian badge design had been received and this was passed around for members to inspect.

Mrs. Curry, our social secretary, was called upon to report on the Christmas party, which was held at Glen Ascham and on the recent theatre party to the Mozart opera, "Marriage of Figaro," presented by the Elizabethan Theatre Trust. Both these events were voted a success, but it was felt that more members would have supported the theatre party if it had not been held so early in the year.

As this was our first meeting in 1957 we had four guests, namely those girls who had been awarded the Association's prizes for Pharmacy I and II at the University. We wish to congratulate these girls on their results and wish them every success in their future studies, namely Mamonde Reilly and Janet Paviour, who shared the Materia Medica prize; Margaret Esplin, Chemistry I; and Elizabeth Laverich, Botany I.

Mrs. Campbell was pleased to announce that Mrs. Weber has been kind enough to loan her Bellevue Hill home for our yearly "At Home" evening, which is to be

held on March 19, a date which we request all members to leave free for this event.

Unfortunately our guest speaker, Dr. Couch, was ill and unable to come—we hope we shall have an opportunity later in the year to hear his talk on "Intelligence and Intelligence Testing."

Miss Joy Latham filled in the gap at extremely short notice by showing a selection of her own 35 mm. slides which she had taken during her recent visit to Europe. These were of great interest to all present, and many members discussed familiar scenes and places they had once visited, while others learnt of new places and new and varied landscapes. Joy concluded her selection by showing about a dozen slides she had taken in New South Wales, to show that we have at home many interesting places and much natural beauty.

Coffee was served during our intermission, and at the conclusion Mrs. Campbell thanked Miss Latham for a very interesting evening.

HEALTH AND WELFARE OF WORLD'S GROWING NUMBERS

A Director of the Pfizer Corporation, the world's largest producers of antibiotics, speaking at the 29th International Congress of Industrial Chemistry in Paris, said that the shortage of scientists, particularly of teachers and students, meant that all the leading countries were approaching a technological crisis. There was a need for new forms of collaboration between industry and education. It has been calculated that in 1957 the world's population would reach three thousand million—500 million more than in 1956, and now that antibiotics for agriculture and food preservation were gradually being more widely used it seems almost providential that they should have been found to have productive as well as healing powers. Intense research activity was going on in this sphere. In association with a Norwegian whaling concern Pfizer was currently conducting large-scale experiments in the Antarctic on the antibiotic preservation of whale meat.

Eighty per cent. of the prescriptions handled by pharmacists today could not even have been written thirty years ago. In recent years some lethal diseases had been literally eradicated in large regions. Others, it was already known, would come to the same end—leprosy, malaria, diphtheria, poliomyelitis—"firstly in regions and finally everywhere."

"If people everywhere could know all that is going on in the fields of research they would have a message of hope that in the lifetime of many will surely be translated into actual event and accomplishment. Pfizer was spending seven million dollars a year on research. The research associated with mental health, and the discovery that the hormone serotonin plays an important part in the functioning of the brain has brought the relaxant drugs, the ataraxics, and with them the boon of relief from tension and mental stress and strain which are one of the great sources of ill-health in all countries in which high standards of civilisation prevail.

AT THE COUNTER

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New Books

AIDS TO DISPENSING. Fifth Edition, 1956, pp. 167. Revised by G. M. Watson, B.Pharm., F.P.S. Students' Aids Series. Bailliere, Tindall & Cox, London.

The fifth edition of this small book has been completely revised in accordance with the B.P. 1953 and modern developments.

In spite of added material, the book is 37 pages smaller than the previous edition. This has been achieved by deleting obsolescent material, such as the chapter on plasters, and by simplifying several sections, notably the table of displacement values for suppositories and the section on pill excipients. The chapter "Antibiotics" has, rather unexpectedly, been reduced by six pages. However, very little dispensing is necessary with these substances, as they are supplied in most therapeutic forms by the manufacturers; therefore, the section is mainly concerned with stability and conditions of storage.

As Miss Watson states in the preface, "pharmaceutical practice has changed considerably since this book was first written." It must have been difficult to decide the additions and deletions, as it is impossible to please all potential users of the book. Perhaps the new chapter on eye preparations could have been extended somewhat—it occupies only one page of the book! It seems a pity to have deleted the concise but very useful information on individual bactericides contained in the previous edition. However, the book is definitely concerned with general principles only, and where more detailed information is required students should consult lecture notes or a general text-book.

A few minor details in the introduction, referring to dispensing of N.H.S. prescriptions, are not entirely applicable to Australian practice.

Many pharmacists would disagree with the statement on page 50, that Mucilage of Tragacanth as a suspending agent "is really only suitable for preparations intended for external use"; also, the recommended use of Glycerine Suppository, B.P., as a suitable base for glyco-gelatin suppositories; in practice this is frequently found too soft for general use.

The excellent chapter on sterilisation has been thoroughly revised, and is a very valuable part of the book.

The detailed attention that has been devoted to the revision of the text extends to the use of more modern examples, in which Latin is very much reduced and Arabic numerals used instead of the Roman figures; also to the consistent use of capitals for the names of B.P. substances (frequently omitted in the previous edition).

The sections involving calculations, particularly those on isotonic solutions, have been revised and largely rewritten, with new examples, to show the steps involved in the clearest manner.

This edition, as previously, admirably fulfils the need for a concise reference in the dispensary, and students will find it a valuable aid to study.—D.C.L.

* * *

Pharmaceutical Formulas—Volume II—Eleventh Edition, 1956. Pp. xv plus 952. Published by "The Chemist and Druggist," London. English price 42/-.

For over half a century this book has been providing pharmaceutical chemists with well-proven formulas—formulas for almost every type of preparation required in the practice of pharmacy, other than medicines for therapeutic purposes.

In general design this edition resembles that of the tenth, but its contents have been revised and rearranged to provide for modern trends in formulation. While a number of well-established formulas have been retained, many new ones have been introduced. Titles of formulas in the text now appear in heavier type than in the tenth edition—a decided improvement.

Formulas are sectionised, the most notable section being that dealing with perfumes, cosmetics, all types of toiletries, hair and dental preparations. This section occupies about one-third of the book, and is printed on yellowish-tinted paper for quick reference.

Other sections are devoted to confectionery, culinary and household requisites, cleaning materials, polishes, varnishes, adhesives, writing materials, photographic formulas, horticultural and agricultural preparations, pest exterminators and veterinary formulas.

Each section commences with general information concerning formulas which follow, such as methods of usage, et cetera.

Useful formulas are those for food preparations for diabetics—perhaps a diabetic preparations section could be included in future editions.

While in many respects formulas in this edition have been modernised, it is rather surprising that more use has not been made of newer materials such as synthetic surface-active agents and emulsifiers, as ingredients of certain types of external preparations.

This book contains a wealth of formulas for miscellaneous purposes—6,600 entries appear in the index. It would be hard to visualise a pharmacy without a copy.
—E.M.W.

* * *

"The Merck Manual of Diagnosis and Therapy." Ninth Edition, 1956. pp. xv, 1870. Published by Merck & Co., Inc., Rahway, N.J., U.S.A. Australian price: 92/6.

The appearance of the ninth edition of this manual, which is "dedicated to the Doctor of Medicine and to his colleagues and aides in the allied professions," is a clear indication of the continued popularity of this comprehensive, yet very concise, presentation of current medical knowledge and its practical application.

The manual is the result of the collaborative work of many leading clinicians, mainly from the United States and Canada, under the guidance of an editorial board of five medical men. The book has been thoughtfully planned and carefully edited so that the information regarding any particular disease or disorder and its treatment can be located very rapidly.

A marginal thumb-index divides the main part of the book into twenty sections. Each of these sections comprises several chapters related to groups of diseases, anatomical regions such as ear, nose and throat, and specialities such as gynaecology and obstetrics, neuropsychiatry, etc. Each section is preceded by a table of chapter headings so that any particular aspect of a subject may be referred to easily and quickly.

The "prescriptions," which complete each section of the manual, are arranged in therapeutic categories and are intended to provide a comprehensive list of currently available drugs and their modes of presentation. Dosages and recommended methods of administration are also included. The medicaments are those included in the United States Pharmacopoeia, the U.S. National

Formulary, and New and Non-official Remedies. This would impose some limitation on the value of the prescription sections outside the United States.

The main emphasis is placed on diagnosis and therapy, but there is a wealth of information on many classes of modern drugs and on recent advances in the fields of antibiotics, immunisation, pre-natal and post-natal care, nutrition, etc.

Under the section "Physical and Chemical" advice is to be found regarding emergency treatment of burns, poisoning, shock, bites and stings. Methods of resuscitation are also described.

The manual does not purport to be a textbook of medicine and references to original literature are omitted. The contributors remain anonymous. Neither of these features detracts from the immediate practical usefulness of the volume, "whose primary objective is to aid in the daily practice of medicine."

It would be a difficult task to find many other reference books in which the type of information contained in the Merck Manual is so readily accessible in such a lucid and concise form.

The Merck Manual is primarily a "vade mecum" for the practising physician, but it is also a very fitting companion to the Merck Index of Chemicals and Drugs which is very well known in pharmaceutical and chemical circles as a reference handbook.—A.J.C.

PUBLICATIONS RECEIVED

The Chemist and Druggist Diary and Year Book, 1957. Pps. vii + 410. C. & D. Publications, 28 Essex street, Strand, London, W.C.2.

This familiar volume, now in its eighty-ninth year of publication, fully maintains the high standard of previous editions. The one notable omission in the 1957 volume, which has appeared in immediate recent issues, is the "Cross Index of Drug Names." This most useful section will be missed by many subscribers, and the reviewer cannot understand why the publishers have seen fit to delete it. While the compilation of such a list is no doubt an arduous and exacting task, it is one which has been very competently handled by the staff of the "Chemist and Druggist" in the past; both practising pharmacists and those engaged in administration will miss this excellent service.

Keeping in step with recent rapid advances in medicine, the section on antibiotics has been greatly enlarged and is worthy of note. Presented in tabular form and extending over seven quarto pages, it enumerates some thirty antibiotics and includes those more recently discovered (e.g., aureotracin, cycloserine, fumagillin, gramicidin, nystatin, vancomycin, etc.). The table shows the official or non-proprietary name, the trade names, the presentation, indications, and gives brief notes on stability, toxicity, side-reactions and other details where applicable. A short list of some diseases caused by pathogenic bacteria and the organisms' reaction to Gram's stain forms part of this section.

A concise survey of the operation of the National Health Service in England and Wales and the contracting pharmacists' obligations under the scheme gives, among other items, details of:

- (a) The Pharmaceutical List.
- (b) Hours of Service.
- (c) Advertising.

- (d) Prescribable Items.
- (e) Rural Areas.
- (f) Drugs supplied by Doctors.
- (g) Drug Testing Scheme.
- (h) Drug Tariff.
- (i) Surgical Appliances.
- (j) Dental Prescriptions.
- (k) Barbiturates.
- (l) Packings to be used for Tablets, etc.
- (m) Pricing and Basis of Payment.
- (n) Proprietary Preparations.
- (o) Prescription Levy.

A similar survey (details of which are modified) is given for Scotland and for Northern Ireland.

Pages 306, 307 and 308 are devoted to a guide to the provisions of the Restrictive Trade Practices Act of 1956. It is of interest to note that the system of price protection previously effected by bodies like the P.A.T.A. (based on the common law right of the combination of parties in defence of trade interests) is prevented by Section 24 of the Act. Under Section 24, "agreements between suppliers or their associations to discriminate against or impose penalties on, dealers who fail to observe resale price conditions in relation to goods are made unlawful; there is a corresponding prohibition of agreements between dealers or their associations to discriminate against or penalise suppliers who do not impose, or refrain from enforcing, such conditions."

Also included in the Year Book are: Legislation governing Patents, Registered Designs, Trade Marks and Copyright; a directory of Pharmaceutical Organisations in Great Britain; The Poisons Lists and Dangerous Drugs Lists of Great Britain, Northern Ireland and Eire, and all those other details regarding pharmacy in Great Britain which one expects to find in the C. and D. Year Book.

May we perhaps hope that the practice of publishing the "Cross Index of Drug Names" will be resumed in the 1958 issue?—F.H.B.

* * *

The Calendar of the Pharmaceutical Society of Great Britain, 1956-1957. Pps. vi + 309: The Pharmaceutical Society of Great Britain, 17 Bloomsbury Square, London, W.C.1. (17/6 Sterling.)

While the Calendar of the Pharmaceutical Society of Great Britain does not directly affect the practice of pharmacy in this country, and is chiefly of interest to pharmacists in the United Kingdom, there is much of historical interest to be gleaned from its pages.

A glance down the list of Past Presidents traces the path of progress via many famous names in pharmacy. The first President in 1841 was William Allen, F.R.S., while other giants who stud the list are John Savory, Thomas Morson, Peter Squire, Jacob Bell, Thos. H. Hills, and William Martindale. D. Bell Hanbury filled the office of treasurer for 16 years from 1852 to 1868.

Elias Bremridge occupied the position of Secretary to the Society for a period of 27 years between 1857 and 1884, to be followed by his son Richard Bremridge, who served in a like capacity from 1884 to 1913. The two Bremridges thus devoted 56 years to the service of the Pharmaceutical Society. This has been commemorated in a manner at once unique and dignified. The name of "Bremridge" has been adopted as the telegraphic address of the administrative offices of the Pharmaceutical Society of Great Britain.

Of quite recent historical interest is the name of one honorary Fellow of the Pharmaceutical Society who

was elected in 1955. The entry (and the only honorary Fellow appearing in the Calendar) reads:

FELLOWS

Date of Election—1955.

His Royal Highness the Duke of Edinburgh, K.G., K.T.

This must be a source of pride and pleasure to pharmacists throughout the British Commonwealth.

The Publications Branch of the Society, located at 33 Bedford Place, W.C.1., is continually increasing in scope and is now responsible for the publication of the following:

"The Pharmaceutical Journal."

"The Journal of Pharmacy and Pharmacology."

"The British Pharmaceutical Codex."

"The British Veterinary Codex."

"Martindale's Extra Pharmacopoeia."

"The Pharmaceutical Pocket Book."

"The National Formulary."

"The Dental Practitioner's Formulary."

"Hormones—A Survey of Properties and Uses."

"Antibiotics—A Survey of their Properties and Uses."

"The Index of New Products."

"The P. J. Poisons Guide."

"The Statutory Register of Pharmacies and Pharmacists"; and, on behalf of the General Medical Council, "The British Pharmacopoeia."

The publication of these authoritative works is in the capable hands of W. K. Fitch, M.P.S., who is Publications Manager and Editor of the Pharmaceutical Journal, K. R. Capper, B.Pharm., Ph.D., F.P.S., D.I.C., who is Editor of the Scientific Publications Branch, and G. Brownlee, D.Sc., Ph.D., F.P.S., Editor of the "Journal of Pharmacy and Pharmacology."

The Calendar also contains a very full and seemingly constantly increasing list of the Statutes and Regulations by which the conduct of pharmacy in Great Britain is regulated. One hundred and fifty pages of the book are devoted to the section, which would be invaluable to the younger pharmacist here who contemplates going overseas and spending a working holiday in England.

Further general information regarding the Society's activities in Great Britain, including a historical note on the publication of the British Pharmacopoeia, the British Pharmaceutical Conference, and details of research awards and travelling scholarships are also found in the Calendar, which is a very comprehensive guide to pharmacy in the United Kingdom today.—F.H.B.

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Overseas News

GREAT BRITAIN

London, February 8, 1957.

New Minister of Health

The new Prime Minister, Mr. Harold Macmillan, has appointed Major D. F. Vosper as Minister of Health in succession to Mr. R. H. Turton. The new Minister, who is 41 years of age, has been in Parliament for almost seven years. He was educated at Marlborough School and Cambridge, and is in the export trade in Liverpool. He was a Government Whip for three years, and has been Secretary to the Minister of Education since 1954. Mr. J. K. Vaughan-Morgan has succeeded Miss P. Hornsby-Smith as Parliamentary Secretary to the Minister of Health. Miss Hornsby-Smith has become one of the Under-Secretaries to the Home Office. Major Vosper will be faced with many problems, particularly in matters of remuneration for the professions. Doctors are demanding a general increase of £500 per year, and although the former Minister told them that the country's finances could not stand the increase, further talks with their negotiating body were promised for the present month. Chemists are already taking steps to make a fresh survey of dispensing costs, and dentists maintain that they are the only profession which has not received an increase since the service began. Hospital costs continue to rise, and the need for further capital expenditure is paramount.

Prescription Charges

When Parliament reassembled after the Christmas recess, the new Minister was asked a number of questions regarding prescription charges. Some referred to the hardship caused to diabetics and others suffering from chronic illnesses. It was also suggested that prescriptions in industrial areas had fallen by 60 per cent. during December, and another member put the figure at 50 per cent. Mr. Vosper said that he had no evidence from professional organisations or elsewhere that patients were not receiving the treatment they needed or that there had been such a reduction in the number of prescriptions dispensed. The annual charge to stabilised diabetics would be in the neighbourhood of 17/- to 27/-. Dr. Stross referred to medicines which would keep only a few days, and which were prescribed for prolonged treatment. These included mixtures of opium and aspirin required for inoperable cancer, and they must be made up fresh. Mr. Vosper said that some advice had been issued, and that any further evidence submitted would be examined.

Mr. Vosper told the House of Commons that negotiations were continuing with the pharmaceutical industry concerning the prices of proprietary preparations. Revised proposals had been made by the industry, and as yet he had only just started to consider the position, and he could not say when he would be able to announce the decisions which had been reached about prices.

Polio Vaccination Hold-up

The Ministry of Health has announced that there will be a delay in beginning the vaccination scheme against polio this year. Two batches each sufficient for 200,000 children have failed to pass the final stringent purity test. The last batch tested did not contain any live germs, but was not up to the requirements of the Therapeutic Substances Act. It was expected originally that inoculations would begin in February and be continued until the end of June. The Ministry have hopes that the second batch may prove correct when the test is repeated, but another ten days are required. The vaccination programme may begin in early March.

Colouring of Tablets

At its February meeting the Council of the British Pharmaceutical Society changed its views, to a great extent, on the colouring of tablets. Some sixteen months ago the Council informed the British Pharmacopoeia Commission that it supported the Commission's views that the official requirement should be for colourless tablets. Recently the Commission told the Council that it had received a memorandum from the Association of British Pharmaceutical Industry, urging an amendment to the requirements of the Pharmacopoeia, and from the Canadian Pharmaceutical Manufacturers' Association, expressing some of the reasons why the Association is in favour of coloured tablets. The Council, while maintaining their opinion concerning the disadvantages attendant on the use of colouring tablets, considered that the policy expressed in the Pharmacopoeia, and which had been previously supported, was not achieving the result intended, consequently no useful purpose would be served by continuing it. Accordingly the Council considered that in all the circumstances the policy was no longer tenable.

The Ministry of Health, which in fact is the largest customer for tablets in Britain, accepts certain coloured tablets as meeting the requirements of the National Health Service, and in some cases only a coloured tablet is available. In others uncoloured tablets can also be bought, and some confusion has been caused by patients taking their prescription for a repeat to a different pharmacist and receiving a different-coloured tablet. In the export market manufacturers may have difficulties in having their products accepted in many countries if they do not comply fully with the B.P. specifications, thus coloured tablets are not acceptable and uncoloured ones do not commend themselves to the foreign buyer, especially when their own national Pharmacopoeia permits colouring. One of the arguments against colouring is that the final products may resemble sweets and encourage children to eat them. Colouring, however, in poisoning cases may help in identification. It has been suggested that the Association of British Pharmaceutical Industry, which has already done good work in promoting uniformity of tablet size, may now consider introducing uniformity of colour.

Mr. Arthur Mortimer, O.B.E., M.P.S., who as secretary to the Wholesale Drug Trade Association (now the Association of British Pharmaceutical Industry) was responsible for integrating the industry, died at the end of January. Mr. Mortimer, who was also a barrister, practised law for some years after having been engaged in retail pharmacy, but in 1930 became secretary to the W.D.T.A., and continued in this position during the difficult years of the war. During part of this time he was Deputy Director of Medical Supplies, and frequently visited the United States. When he retired in 1943 the annual report of the Association said "his wide experience and specialised knowledge have been of great assistance to members, both collectively and individually, and his ever-willing and careful attention to their problems has won him many friends."

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Plastic Price Stripping



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SPECIAL CHEMIST'S SET
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Comprising 100 ft. ¾ in. plastic price stripping plus 50 dozen assorted plastic numbers and signs.

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Telephone WX 3688

For Fine Chemicals of Finest Quality

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HENRY H. YORK & CO. PTY. LTD.

NEW SOUTH WALES

62 Clarence Street,
SYDNEY
Phone: BX 3151

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Phone: J 2582

WESTERN AUSTRALIA

108 Beaufort Street,
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Phone: BW 1606

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456 Port Road,
HINDMARSH
Phone: LU 8570

As Deputy Director of Medical Supplies, Mr. Mortimer gave great service to this country. It would be difficult to overestimate the importance of his wartime appointment for meeting the nation's needs of vital medical supplies, both for the forces and for the civil population. Mr. Mortimer was known internationally as a Rotarian, being president of International Rotary in Great Britain and Ireland for 1949-50. For a time Mr. Mortimer was associated with the Beecham companies, and was managing director of J. C. Eno and Co. Ltd.

Chemical Exports

Australia and India were Britain's best customers for drugs and medicinal products during 1956, each country absorbing goods to the value of around £3 million, while New Zealand took between £1 and £2 million. Total British exports of these categories reached a new record in 1956 of almost £36 million, or about £60,000 more than in 1955, and £3.9 million above the 1954 figure. Of this large total, antibiotics accounted for nearly £7 million, of which £1.33 million were due to the sale of penicillin. The actual value of penicillin salts sent abroad fell by about £2000, from 1955, although the number of mega units sold increased by almost 30 million. Receipts from other antibiotics also fell from £5.22 million to £4.14 million. Vitamins contributed a total of £2.89 million, a slight improvement on the previous year. Sulphonamide preparations produced £1.6 million, and aspirin fully £1 million; over 300,000 lb. more were exported than in the previous year. Synthetic anti-malarials showed an improvement in sales of nearly £80,000, to reach a figure of £1.05 million. Insulin sales were the smallest during the three years and were under £0.5 million, instead of being above this figure, as in 1954 and 1955.

Floating Laboratory

The Wellcome Trust has made a grant to the Medical Research Council to provide a motor cruiser for the work done in the council's laboratories on the Gambia river. The vessel will be built and equipped so that it can be adapted to become a floating research laboratory, and it will help the council's staff in two ways. It will facilitate communications between the main laboratories at Fajara and a branch laboratory at Keneba, some 70 miles up river, and it will enable researchers to live and work for short periods in parts of the country at present inaccessible to them.

Driving and Diabetics

A Divisional Court of the Queen's Bench has decided that a motorist who was a diabetic and crashed his car through a hedge after taking an insulin injection, was under the influence of a drug. In Britain it is an offence against the Road Traffic Act to be in charge of a motor vehicle while under the influence of alcohol or a drug to such an extent as not to have it under proper control. Lord Goddard said that if people had to take remedies which might send them into a coma, they should not drive, because they were a danger to the public.

This ruling has given grave concern to diabetics all over the country, as thousands of them are drivers, and several hundreds are doctors. Technically there has never been any real doubt that insulin is a drug, even although it is a naturally occurring substance in the body of healthy people. The number of cases of diabetic drivers developing hypoglycaemia in charge of a car is extremely small, and in the past if such a case has come before the courts it has usually been dealt with by a fine, with or without endorsement of the driving licence. In the metropolitan area a diabetic is allowed to drive a public conveyance provided he passes a medical examination annually. The Diabetic

Association has stated that there is no reason why an individual on insulin whose diabetes was well controlled should not drive a car, but the few drivers who have been unable to recognise the symptoms of an oncoming reaction should take medical advice before applying for a driving licence. All drivers have been warned by the Association to maintain a supply of sugar or glucose in their vehicles as a ready means of overcoming the insulin reaction.

Health Estimates

Supplementary estimates published on February 7 show that a further £26.9 million is required for the National Health Services in the year ending March 31. England and Wales require £24.9 million of this total, and the figure includes £13.25 million for hospital services. Salary awards in hospitals take up £10 million. Higher prices account for another £2.5 million, and just over £1 million is required to meet increased rates on the revaluation of hospital premises.

An increase in the number of prescriptions and in their average cost has added about £8 million to the bill, even taking into account a saving of between £750,000 and £1.2 million from the higher prescription charges which came into force on December 1. Extra payments to doctors and dentists will absorb a further £4.3 million, and welfare milk and welfare foods go up by £1.4 million.

Cost of the Service

Last year, according to the report of the Comptroller and Auditor-General, the health service in England and Wales cost £491 million gross, or £423.8 million net. Pharmaceutical services in England cost £41 million, in Wales £3.2 million, and in Scotland £5.2 million. From 1949 to 1955 the total number of prescriptions in the three countries has risen from 219 million to 247 million, with a rise in costs from £34 million to £55 million. The average cost per prescription has risen from 3/1 to 4/5, and the average cost per patient has gone up from 15/5 per year to 24/3. In the first six months of last year total prescriptions at 133 millions were 3.5 million more than in the previous year, and the average cost had reached 4/8, a rise of 4d. In England and Wales in 1955 36 per cent. of all prescriptions are estimated to have been for proprietary preparations, with a corresponding figure of 46 per cent. in Scotland. This accounted for 64 per cent. of the drug bill, and 66 per cent. in Scotland. In a sample analysis over four months in 1955 it was found that 88 per cent. of the prescriptions for proprietaries were for preparations classified as not therapeutically superior to standard preparations.

The Ministry of Health has proposed to the British Medical Association that an independent committee without representatives of the department should be formed to undertake an inquiry into the cost of prescribing and to survey all the relative factors. The Ministry is now seeking a chairman for the committee.

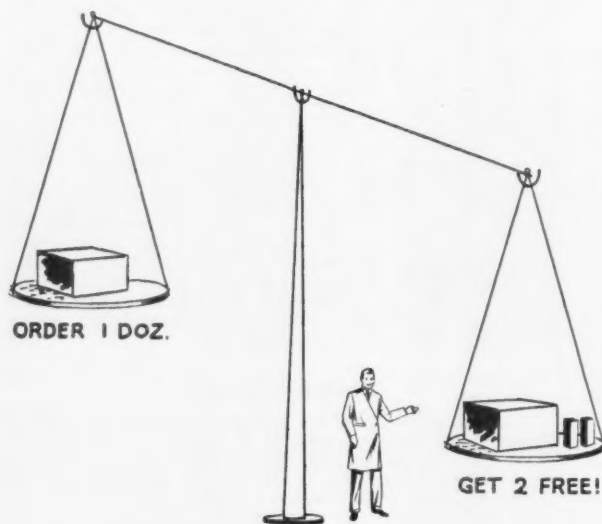
The Modern Retail Pharmacist

In the course of an address on pharmaceutical education to a local branch of the Society, Mr. C. W. Maplethorpe, F.P.S., F.R.I.C., M.I.Chem.E., Chairman of the Education Committee of the Council and managing director of Allen and Hanbury Ltd., said in the pharmacy which is adequately doing its job the pharmacist must be prepared to fill the role of technologist, professional man and business man. As a technologist, he must be able to instruct or supervise staff in the performance of some of the more complex operations of pharmacy. As a professional man he must be able to meet the doctor, the dentist or veterinary surgeon on

BIG-SCALE BONUSES

STIMULATED BY A NATION-WIDE ADVERTISING CAMPAIGN, YOUR SALES OF AVODEX VITAMIN-FORTIFIED SLIMMING BISCUITS DURING MARCH CAN BE AT A RECORD PEAK. IT CAN BE A MOST PROFITABLE PEAK, TOO! LOOK AT THESE HUGE BONUS

SCALE 1
2 full packs free
with every dozen
order—you make
55%
on cost incl. tax!
Actual profit
£6'5/-



YES, 55% PROFIT ON COST—ON A CHEMISTS-ONLY LINE WITH AN ESTABLISHED NATIONAL ACCEPTANCE BY THE PUBLIC AND THE MEDICAL PROFESSION!

MAMMOTH MARCH ALL-STATES AD. PLAN TO ENSURE YOUR AVODEX STOCKS GO FAST!

After a vigorous February Campaign, the manufacturers of Avodex have authorised an avalanche of advertising in the leading newspapers of N.S.W., Victoria, Queensland, South Australia and Western Australia throughout March. You should have ample stocks.



ORDER IMMEDIATELY THROUGH YOUR REGULAR SUPPLIER—DISPLAY—

ON AVODEX FOR MARCH

SCALES WHICH WILL APPLY ON ALL YOUR ORDERS DELIVERED TO MARCH 31!
ORDER NOW—AND ENJOY UNPRECEDENTED BONUSES!

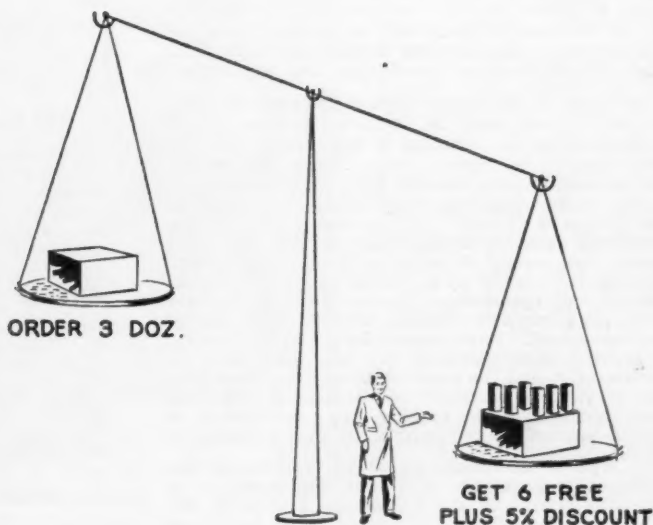
SCALE 2

6 full packs free
and 5% discount
on every 3 dozen
order—you make

63%

on cost incl. tax!
Actual profit

£20/8/9



THIS SCALE IS EVEN MORE GENEROUS! ONLY THREE DOZEN SALES, INCLUDING CUSTOMERS' REPEAT ORDERS, AND YOU NETT A HUGE £20/8/9! THIS IS REALLY PROFIT!

FREE STORE AIDS A'PLENTY—DIET CHARTS— SHOWCARDS—LEAFLETS—WINDOW DRESSING

Have you a full supply of these sales aids? If not, specify them with your bonus order. Avodex literature, showcards and packs are beautifully designed—display them in your choicest position and they'll work for you like silent salesmen!

SELL—AND THEN RAKE THESE BIG-SCALE PROFITS AGAIN ON REPEAT MARCH ORDERS!

an equal footing and talk to him in his own language. As a business man he must be familiar with recognised business procedure and administration, and he must in this capacity be just as capable of dealing with accountants and solicitors as he is capable of dealing with the doctor in his professional capacity.

During the last twenty years, with the introduction of new forms of medication, pharmacy has become a more complex science, and the establishment in which the pharmacist works has to keep pace with this development in medical and pharmaceutical practice and become more professionally departmentalised than is now customary. Medical science has moved rapidly in the last decade—in fact, so rapidly that it is no longer possible for the medical practitioner to be master of all branches of medicine. There has been a degree of specialisation in pharmacy, but the task of the owner or manager of the modern pharmacy is to meet the ever-growing demands of specialist medical practice with up-to-date pharmaceutical knowledge and technique.

The best type of pharmacy holds a Therapeutic Substances Act licence, and, in addition, in some pharmacies throughout the country a wide range of biochemical analysis is carried out. There are certain ancillary services—quite outside the scope of ordinary dispensing—with which the fully equipped pharmacy must be prepared to deal. For instance, there is the sterilisation of drums of dressings for doctors and nursing homes; the supply of oxygen therapy equipment, and possibly the supply of a limited range of surgical instruments and appliances. It can, perhaps, be said that the retail pharmacies dealing with the wide variety of operations which I have mentioned are in a minority; at the moment they certainly are, but they exist all over the country, and the number developing these professional services is progressively increasing, and must be taken into account in making any assessment of the type of pharmacist required in general practice.

If this type of establishment is to progress in the future—as it undoubtedly will—and pharmacy is to take the full benefit of the knowledge and scope for professional work which is now open to it, ways and means must be considered by those responsible for pharmaceutical education of integrating academic and post-graduate training much more closely.

Shortage of Hospital Pharmacists

Sir Hugh Linstead, M.P., writing as chairman of the committee set up in 1951 to examine some aspects of hospital pharmacy, in a letter to "The Lancet," states that inadequate salary scales had been rightly identified as a main cause of the staff shortage. That, however, was by no means the whole story, he says. Like the general practitioner, the hospital pharmacist was looking for a professional career that was progressive and satisfying as much as financially rewarding, and too many hospitals failed to provide it. A campaign to increase recruitment could not succeed if it were linked only with better salaries. Management committees should consider, in consultation with their chief pharmacist, how far the inadequacies of their pharmacy departments might be responsible for shortage of staff. Moreover, the chief pharmacist should have the authority and responsibility which must be accorded to the head of a department if he was to do full justice to his work.

The salary scale for pharmacists should depend more upon the complication of the work of their department than on the size of the hospital. It should bring a pharmacist up to a good competence at forty or so, and beyond that there should be a sufficient number of well-paid senior posts throughout the service to attract good men to a hospital career.

Trade Notes

Menley & James (Aust.) Ltd. and **A. J. White (Aust.) Ltd.** announce the appointment of **Mr. E. H. Kidger** as Managing Director and **Mr. R. K. Wyburn** as Director of each company. **Mr. Kidger**, who has been General Manager of both companies for the past 43 years, left recently for Europe on six months' long service leave.

A. J. WHITE LTD.

The board of directors of **A. J. White Limited**, London, has announced the election of **Mr. E. H. Kidger** as managing director of **Menley & James (Australia) Ltd.**, and **A. J. White (Australia) Ltd.**, and of **Mr. S. C. Fenwick** and **Mr. R. K. Wyburn** to the boards of those two companies.

THE UPJOHN COMPANY (AUST.) PTY. LTD.

A Products Catalogue, printed by Upjohn of England Ltd., has been forwarded by the above company to chemists throughout Australia.

The catalogue, which is presented in a form to facilitate ready reference, is handsomely presented, and should be of assistance in any pharmacy.

ZETTYN OPHTHALMIC ANTISEPTIC SOLUTION

The above product was the subject of a reference in the Prescription Proprietaries Card Service for the month of January, 1957.

Since the distribution of the January cards we have received advice from the Medical Division of **Frederick Stearns and Co.**, Division of **Sterling Drug Inc.**, that this product has not been released.

HAMILTON LABORATORIES' DIRECTOR: OVERSEAS VISIT

Mr. M. A. Blake, B.Sc., Managing Director, The Hamilton Laboratories Limited, Adelaide, will board the "Iberia" at Adelaide on April 25, for an extended overseas tour and will visit Great Britain and most countries on the Continent.

Many of the leading pharmaceutical manufacturers will be contacted, and developments in the pharmaceutical industry will be studied. Particular attention will be paid to the recently developed process of tablet coating by compression methods. In addition, keen attention will be given to plant, packages and packaging techniques. The opportunity will also be taken to establish closer liaison with the Company's buying agent in London.

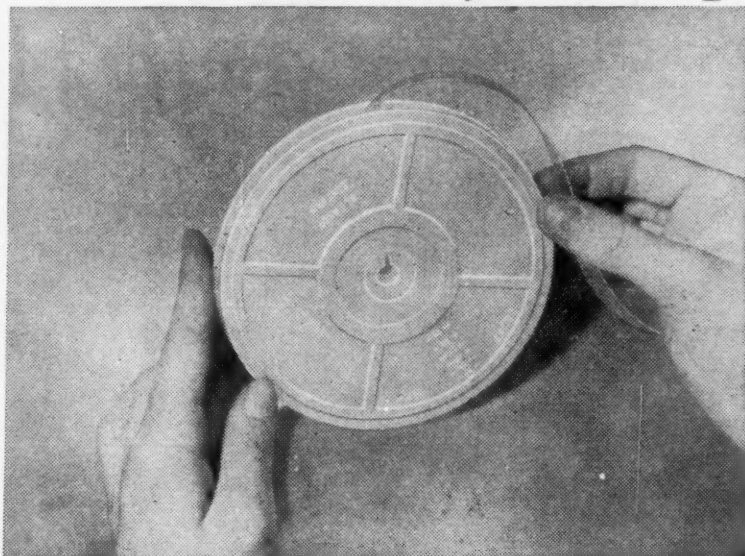
This is the first overseas business visit of an executive of The Hamilton Laboratories, but it will be followed at regular intervals by visits of other executive officers, so that the Company can keep abreast of the times.

Mr. Blake will be absent from Australia for about seven months.



Mr. M. A. Blake

NEW AND NECESSARY FOR YOUR CINE FAN CUSTOMERS *Bleacoy Cinepac*



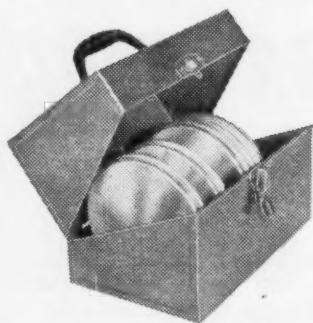
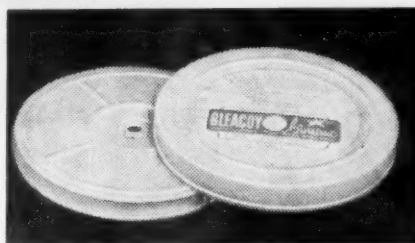
THE COMBINATION 8 mm REEL AND CAN

The Bleacoy Cinepac combination reel and can in 8 mm 200 ft. size is an ingenious plastic unit which by its novelty, utility and price economy makes separate reels and cans obsolete. The Cinepac cuts the price of storing 200 ft. of 8 mm film and the need for a separate can is eliminated.

Retail 8/11

EASY TO THREAD . . . you simply hold the film between thumb and index finger approximately $3\frac{1}{2}$ in. from end. While reel is turning, drop end of the film over the centre of the hub. Four teeth on the hub of the reel engage the sprocket holes of the film.

To close reel, hold the lid in the fingers. Drop the reel in with engraved side down and press firmly into place and you have a neat compact protective case for your film.



Don't be satisfied with half the sale, offer the **GILKON REEL CHEST**

Compact — Portable

The keen movie-maker protects the fruit of his labours by storing his films in an orderly fashion. He appreciates portability for his films. All keen movie-makers will want a Bleacoy Reel Chest for the utmost in protection from dust, quick reference and portability.

Retail £3/11/6

**AVAILABLE THROUGH YOUR USUAL DRUG WHOLESALER
OR DIRECT FROM THE DISTRIBUTORS**



H. BLEAKLEY PHOTOGRAPHICS PTY. LTD.

397 Kent St., Sydney. 323 Bourke St., Melbourne. 621 Wickham St., The Valley, Brisbane. 84 Franklin St., Adelaide. 61 Stirling St., Perth.

The Meds story....

"Five days of



**New Freedom"
for 1957**

will mean

**GREATER SALES
GREATER PROFITS
for YOU!**

**Good DISPLAY
increases
impulse buying**



This hard-selling story, nationally advertised in selected women's magazines, will channel an ever-growing number of customers to you. It is a campaign that will result in greater sales with consequent extra profits to you. Cash in on it by having adequate stocks and prominently displaying them.

PRODUCTS OF JOHNSON & JOHNSON • THE MOST TRUSTED NAME IN SURGICAL DRESSINGS

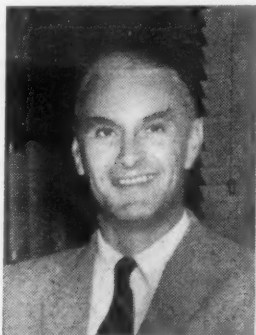
JJ25

B.W. & CO. MEDICAL DIRECTOR

Burroughs, Wellcome & Co. (Australia) Ltd. advises that Dr. K. S. Alstad, B.Sc., M.D., M.R.C.P. (Edin.), D.P.H., arrived in Sydney early in February to take up his appointment as Medical Director

Prior to his appointment here, Dr. Alstad was Physician Specialist of the Government Medical Service, Federation of Malaya. He has had a wide clinical and teaching experience in Scotland, New Zealand and British Columbia, and is the author of many published papers on clinical research.

Amongst his many interests here will be included the extension and further development of B.W. & Co.'s existing medical information service and the arrangement of local trials in association with the Clinical Research Unit of The Wellcome Foundation Ltd.



Dr. K. S. Alstad

CHESEBROUGH-PONDS

Budding Hollywood star, Victoria Shaw, was guest at a recent cocktail party given in her honour by Chesebrough-Pond's Inc., in conjunction with Columbia Pictures.

During the evening, guests were entertained by selections from the Columbia production, "The Eddy Duchin Story," starring Tyrone Power and Kim Novak. In this film Miss Shaw appears as Eddy Duchin's second wife, Chiquita.



From left to right: Miss Margaret Marshall, hostess for the "Chesebrough-Pond's Playhouse" series; Mr. Ralph Ward, General Manager, Chesebrough-Pond's; Miss Victoria Shaw, and her husband, Mr. Roger Smith.

trends just because they are fashionable. Through her new hair styles, Victoria has been given new personality, added beauty.

Miss Shaw, who made a personal appearance on the "Chesebrough-Pond's Playhouse," telecast over Channel TCN and HSV, was introduced on the programme by Miss Margaret Marshall, Hostess for the "Chesebrough-Pond's Playhouse" series.

Victoria Shaw has been prominently featured in the national Vaseline Wonder Foam Shampoo advertising.

For her part in "The Eddy Duchin Story," Victoria was groomed by Columbia's chief beauty experts. Her hair was restyled by Helen Hunt, who believes in individuality, rather than following too closely on current

Commenting on this Victoria said: "Great emphasis is placed on one's hair in the movie world, because nothing mars beauty more than hair which is difficult to manage, or full of straggly ends. Although I had the attention of skilled hairdressers on the set, home care was also most important if my hair was to be kept clean and easy to manage. It had to be washed every few days, and I haven't found anything to equal Vaseline Liquid Shampoo for keeping my hair soft and shining."

For the past year Chesebrough-Pond's Inc. has featured Victoria Shaw in its ads. for Vaseline Liquid Shampoo, and she will be featured continually in leading women's magazines during 1957.

Retailers should place displays of Vaseline Liquid Shampoo now, and tie in again with the release of the film in local theatres.

TRIDAL TABLETS

Paired Piperidol Therapy

Sigma Co. Ltd. recently introduced Tridal Tablets to the Australian market. Tridal Tablets combine the action of Dactil and Piptal—two piperidol derivatives developed in the research laboratories at Lakeside International Corporation, U.S.A.



Tridal Tablets provide prompt, prolonged relief of generalised functional gastro-intestinal disorders such as gastric neurosis, hyperacidity, hypermotility, and epigastric distress.

Piptal and Dactil are stated to be very popular with the medical profession, and it is anticipated that Tridal, which has a wider range of clinical usefulness, will be even more popular.

Like Dactil and Piptal, Tridal is claimed to be virtually free from side effects and toxic reactions.

Each Tridal tablet contains 50 mg. Dactil and 5 mg. Piptal.

Tridal is available in bottles of 25 and 100.

MR. AND MRS. W. M. BRISTOL'S VISIT TO AUSTRALIA

After we had closed for press for our issue of January 30, which contains references to Mr. and Mrs. Bristol's visit at pages 49 and 57, the advertising agent of Bristol-Myers Co. Pty. Ltd. sent us some interesting notes on Mr. Bristol's career.

Mr. William M. Bristol, Chairman of the international Bristol-Myers organisation, has now returned to U.S.A. at the completion of a visit to his company's Australian subsidiary.

Mr. W. M. Bristol and his two brothers are all active in the company founded by their father, William M. Bristol, and a close personal friend, John Myers. The company will celebrate its seventieth year in 1957. It became a public company in 1927 and has the enviable record of having paid a dividend for 57 years.

Before he left on the return journey to America on February 12, Mr. Bristol said that his five weeks of observation in Australia had confirmed his belief in this country's vast potential.



Mr. William M. Bristol

Whilst he viewed with some doubt our price structure generally and certain aspects of the current policy of import restrictions—a long established company is not even permitted to make a genuine gift of a machine or essential raw material to a subsidiary to help introduce a new product—Mr. Bristol was confident that the Australian spirit of progressiveness would assert itself and that industry and business in this country would find itself in the ascendant.

Asked about Ipana toothpaste sales in Australia, Mr. Bristol said that although these were quite satisfactory, he was perturbed by the trend of dentifrice business towards the stores and away from pharmacy. The arrest of this trend was a task which Bristol-Myers was again tackling. The enthusiastic co-operation of chemists themselves was, however, indispensable if valuable dentifrice business was to be retained by them. Unless chemists gave Ipana prominent display, and featured Ipana in every possible way, it could not be expected that the high demand for "pharmacy's own toothpaste" could be maintained and intensified over the years.

BOB DYER COMMENCES ON T.V.

On February 26 Bob Dyer made his first appearance on Australian television screens over A.T.N.-7 in Sydney and G.T.V.-9, Melbourne.

It was not Dyer's first experience of the television camera, he having been something of a pioneer back in 1938, when he featured in B.B.C. transmissions from Alexandria Palace, London.



Bob Dyer with the first contestant in the television version of "Pick-a-box."

Since then he and his wife, Dolly, have made guest appearances on several of the big shows in America during their TV study trip to the U.S.A. last year, when Dyer had access to the important studios and the backroom technicalities.

For 17 years he has been a top radio personality, and viewers, used to his crazy antics, will not be disappointed when they are seen as well as heard; nor will they be disillusioned with Dyer as he photographs on television. His smooth grooming and the drop of three stone in weight is not a matter of vanity but of business.

Entering television and the seventh year of his sponsorship by Colgate-Palmolive almost simultaneously (at seven years he says they've come to the age of reason), Dyer's "Pick-a-Box" quiz occupies A.T.N. and G.T.V. 8-8.30 p.m. every Saturday, and "It Pays to be Funny," sponsorship of which is shared by Colgates and Taubmans Industries Ltd., the same channels every Tuesday night, 8-8.30 p.m.

These two programmes, together with his "Winner Take All" show, will continue to be heard on radio as at present.

B.W. & CO.—NEW ITEMS

Burroughs, Wellcome & Co. (Australia) Ltd. advises the addition of two new products to its list. These are:—



"Migral" brand Ergotamine Compound, which is stated to provide an effective oral treatment for migraine. Each tablet contains 2 mg. ergotamine, 100 mg. caffeine and 50 mg. cyclizine, the addition of the latter allowing a much higher and therefore effective oral dose of ergotamine to be given without causing nausea and vomiting. "Migral" is available only in bottles of 10, list price being 17/6 each.

"Maredox," a combination of cyclizine and pyridoxine, which gives relief from nausea and vomiting associated with early pregnancy. Each tablet contains 50 mg. cyclizine hydrochloride ("Marzine") and 50 mg. pyridoxine hydrochloride (Vitamin B6). "Maredox" is issued in bottles of 25 and 100, list

prices being 21/- and 75/- each respectively.

P.A.T.A. OF N.S.W.

Notified 29/1/57—

General Section: Alteration

British Medical Laboratories Pty. Ltd.			
Size	Retail		Wholesale
Small	5/-	Menthoids, Dr. Mackenzie's	45/- doz.
Large	9/-	Menthoids, Dr. Mackenzie's	81/- doz.
Economy	15/-	Menthoids, Dr. Mackenzie's	135/- doz.

Notified 31/1/57—

Chemists' Section: Alterations

D.H.A. (N.S.W.) Pty. Ltd.			
Size	Retail		Wholesale
	5/-	Elliotts Asthma Powder	40/- doz.
	4/-	Elliotts Mother's Tonic	32/- doz.

General Section: Alterations

	3/6	Bayley's Fluid Magnesia	28/- doz.
		3 doz. lots	27/- doz.
	7/3	Cutine	46/- doz.
	6/9	Elliotts Fruit Saline	54/- doz.
8 oz.	6/8	Virol	60/- doz.
16 oz.	10/3	Virol	92/- doz.

Notified 8/2/57—

Chemists' Section: Alterations

Martin & Co. (Surgical) Pty. Ltd.			
Description or Size	Retail		Wholesale Doz.
½" x 1 yd.		Leukoplast Zn. Ox. Adhesive Plaster	6/-
1" x 1 yd.		Leukoplast Zn. Ox. Adhesive Plaster	8/-
½" x 2½ yd.		Leukoplast Zn. Ox. Adhesive Plaster	11/-
1" x 2½ yd.		Leukoplast Zn. Ox. Adhesive Plaster	14/6
½" x 5 yd.		Leukoplast Zn. Ox. Adhesive Plaster	18/-
½" x 1 yd.		Leukoplast Zn. Ox. Adhesive Plaster, Waterproof	7/9

*These
speciality
products
are widely
advertised
in the
medical
journals*

These products are being specially detailed by all our representatives and extensively advertised in the medical journals.

COLLIRON

for all iron-deficiency anæmias.

EACH TEASPOONFUL (3.5 ml.)

CONTAINS

THE IRON EQUIVALENT OF 32

GRAINS IRON AND AMMONIUM

CITRATE

*Presented in bottles of 4 fl. oz., 8 fl. oz.
and 2 litres*

Colliron Capsules and Colliron Intravenous also available.

NOVO LENTE INSULINS

the original Lente Insulins.

24-hour control with one injection for over 90% of all diabetics requiring insulin.

Presented in vials of 10 ml. containing

NOVO SEMILENTE (I.Z.S. AMORPHOUS)	40 units per ml. 80 units per ml.
NOVO LENTE (I.Z.S.)	40 units per ml. 80 units per ml.
NOVO ULTRALENTE (I.Z.S. CRYSTALLINE)	40 units per ml. 80 units per ml.

NOBECUTANE

the sterile plastic spray-dressing. An effective replacement for conventional dressings.

NOW IN 100 ml. *Presented in spray containers of 100 ml.
and 300 ml.*
SPRAY PACK FOR THE
GENERAL PRACTITIONER. *Bottles of 50 ml.*

EVANS MEDICAL SUPPLIES LIMITED

LIVERPOOL



LONDON

IN AUSTRALIA: EVANS MEDICAL AUSTRALIA (PTY.) LTD., Sydney and Melbourne

Now...

more effective than ever!



with these two added constituents...

Hydroxyquinoline sulphate and urea peroxide

8 — hydroxyquinoline and urea peroxide, the two ingredients newly added to the Massé formula, make the product clinically more effective in that we may now claim that Massé Nipple Cream has anti-fungal properties to

attack the candida always liberally present on the breast of the nursing mother.

ACTIVE INGREDIENTS

5 — amino acridine pyruvate, 0.0695% w/w; allantoin, 2% w/w; 8 — hydroxyquinoline sulphate, 0.02% w/w; urea peroxide.



Pharmaceutical Company

SYDNEY

Description or Size	Retail	Whole- sale Doz.
1" x 1 yd.	Leukoplast Zn. Ox. Adhesive	
	Plaster, Waterproof	10/-
½" x 2½ yd.	Leukoplast Zn. Ox. Adhesive	
	Plaster, Waterproof	13/6
1" x 2½ yd.	Leukoplast Zn. Ox. Adhesive	
	Plaster, Waterproof	19/3
½" x 5 yd.	3/- Leukoplast Zn. Ox. Adhesive	
	Plaster, Waterproof	23/-
1" x 5 yd.	Leukoplast Zn. Ox. Adhesive	
	Plaster, Waterproof	33/-
2" x 5 yd.	Leukoplast Zn. Ox. Adhesive	
	Plaster, Waterproof	59/-
3" x 5 yd.	12/- Leukoplast Zn. Ox. Adhesive	
	Plaster, Waterproof	96/-
1½" x 1 yd.	Handyplast Wound Dressings	
	—Elastic	27/-
2½" x 1 yd.	Handyplast Wound Dressings	
	—Elastic	37/-
3" x 1 yd.	Handyplast Wound Dressings	
	—Elastic	45/-
1½" x 1 yd.	3/3 Handyplast Wound Dressing	
	Waterproof	25/-
2½" x 1 yd.	4/3 Handyplast Wound Dressing	
	Waterproof	33/-
3" x 1 yd.	5/3 Handyplast Wound Dressing	
	—Waterproof	41/-

To Operate as from March 1, 1957

General Section: Alterations

Hillcastle Pty. Ltd.

8/- Inecto—"Rapid," "Ordinary,"
and "Four in One."

11/- Inecto Colour Creme.

Notified 18/2/57.

General Section: Addition

Size	Retail	Wholesale
	Keele Pty. Ltd.	
4 oz.	9/11 Keele Cream	64/- doz.
	Parcel Advantage: 1 Jar to dozen	

Chemists' Section: Alteration

	Baden P. Morris Pty. Ltd.	
1/6	Modern Nurser Teat	9/- doz.
	Parcel Advantage:	
3 doz. lots		8/6 doz.
6 doz. lots		8/3 doz.
12 doz. lots		8/- doz.

Notified 22/2/57—

General Section: Alterations

	Bristol-Myers Co. Pty. Ltd.	
No. 2	3/- "Mum"	21/6 doz.
No. 3	5/- "Mum"	36/- doz.
Small	3/6 Sal Hepatica	
	Under 1 dozen	31/6 doz.
	1 dozen and over	30/7 doz.
Large	7/- Sal Hepatica	
	Under half dozen	63/- doz.
	Half dozen and over	61/2 doz.

Chemists' Section: Alterations

3/6	Ingram Shaving Cream	23/8 doz.
4/-	Ipana Tooth Powder	31/3 doz.
	1 dozen lots	28/8 doz.
	3 dozen lots	83/4 pcl.
	Menley & James (Australia) Ltd.	
3/9	Benzedrex Inhalers	30/- doz.
	(To replace Benzedrine Inhalers)	
	William R. Warner & Co. Pty. Ltd.	
	Dispensing Pack	
500's	Peritrate, 10 mg.	20/- ea.
500's	Peritrate, 20 mg.	25/- ea.
500's	Urolucosil	66/8 ea.

Student Activities

NATIONAL UNION OF PHARMACEUTICAL STUDENTS OF AUSTRALIA CONGRESS 1957

The tenth annual council meeting of the National Union of Pharmaceutical Students of Australia was held during the week of January 6 to 13, 1957, at Kinglake (Vic.).

Fifty-six representatives from all States attended the camp and one observer, Margaret Brunton, represented N.U.P.S.N.Z. The National Council consists of the executive and two delegates from each State organisation. National Council representatives present were—

President.—Brian Page, Queensland.

Vice-President.—Russ Hardidge, Victoria.

Secretary.—Jean Johnson, New South Wales.

National Publicity Officer.—Pat Roberts, Western Australia.

Delegates.—Lory Lightfoot, Narrelle Carter, Queensland; Frank Payne, Heather McLean, New South Wales; Mary McNamara, Yap Yin Cheong, Victoria; Phil Grummet, Beresford Stock, South Australia; Ron Dymock, Margaret Whittle, Western Australia; Jill Henry, Graham Conrad, Tasmania.

This year a new method of conducting the Council Meetings was tried. This consisted of Commissions and Plenary Sessions.—three commissions being carried out at once with, where possible, a representative from each State on each commission. This method was found to be extremely satisfactory and although a record number of 187 motions were passed, the actual time spent in sessions was not as great as in 1956.

Another improvement introduced was the use of printed motion sheets, which greatly reduced the work of the minutes secretary. As in 1956, another typewriter and a duplicating machine had been purchased, and was utilised in roneoing reports and minutes.

The main subjects under discussion were—

Industrial and Educational.—Although the result of the Industrial and Educational Survey held during 1956 was disappointing, because of the low percentage of replies, it was decided that an essentially identical survey form be again distributed in 1957.

A questionnaire on National Student Health is also to be distributed and this will enquire into the position regard regular X-ray, blood group donation, Mantoux tests, B.C.G. vaccination, additional student health facilities and group medical benefits in each State. It was also decided that committees in States in which there are no regular classes in First-aid, endeavour to make such lectures available for students.

During 1956, an attempt was made to extend the Text Book Consection Scheme. The Pharmaceutical Societies made copies of the A.P.F. available at a reduced price, and arrangements were made in Sydney to purchase Cooper and Gunns' "Dispensing for Pharmacy Students" and "Tutorial Pharmacy." In 1957 it is hoped that we will be able to include the notes "Pharmacology for Pharmacy" and the B.P. Dose Book in the scheme.

During this year, further investigation will be made into the possession of Commonwealth Scholarships, Pharmacy-Science Scholarships, the possibility of increasing pharmacy-medicine liaison and of raising the entrance standard in Queensland.

International: During the year, friendly contacts have been established and maintained with several overseas countries, mainly, of course, Great Britain; but also Holland, Germany, South Africa and the United States, and it is hoped that we will be able to arrange for visits of overseas pharmacists to Australia. In 1957 enquiries will be made as to requirements for Australian phar-

macists wishing to work in South Africa, Canada and U.S.A.

New Zealand.—Last Easter the first Council Meeting of N.U.P.S.N.Z. was held and since then close contact has been kept with them. It is thought that N.U.P.S.A. may be able to help them in their Education Scheme, perhaps by making our T.B.C.S. available to them. In 1956, N.U.P.S.A. again gained permission to participate in the New Zealand Plane Charter. It was decided that State newsletters should be sent to New Zealand during 1957.

Asian Students.—Last May, a broadcast was given over Radio Australia by Yap Yin Cheong and Russell Hardidge, explaining the aims of the Asian Students' Bureau. Soon after this, several letters were received from Asian students, asking for assistance in gaining admission to the pharmacy courses and for obtaining apprenticeships. It is intended that liaison be continued in 1957 and to this end we hope to be able to include articles on the Asian Students' Bureau in the A.J.P. and "The Pharmacy Student." It was also decided that any Asian pharmacy student who comes should be met on arrival in Australia and given every assistance possible. Instead of the usual two officers, one in Sydney and one in Melbourne, a National Asian Students' Bureau Officer, Barrie Gerran, who did an excellent job in Melbourne in 1956, has been elected for the coming year.

Publications.—During the last few years, the National Council has realised that a large proportion of the students really know very little about N.U.P.S.A. and for this reason an information leaflet was printed and distributed to all first-year students in 1956. It was decided that this would again be done and that a further information booklet should be printed; also that articles on the aims and objects of N.U.P.S.A. and on the work of the various members of the N.U.P.S.A. executive should be written for the "A.J.P."

Magazine.—Publication of the "Pharmacy Student" is unfortunately extremely late. When it is distributed, however, it will be a new size and will have sections allotted to the various States. It is hoped that these features will be an improvement. In 1957 "The Pharmacy Student" will be ready for distribution before the final examination and so will, in the future, contain reports of the activities of the year from one June to the next.

Probably the most important motion of the meetings was that associated with our change of name to "The National Association of Pharmaceutical Students of Australia" and when this is ratified by the constituent organisations, N.A.P.S.A. will be our title.

The N.U.P.S.A. Badge Competition was won by Mr. Peter Hickey, of Queensland, with an entry consisting of a boomerang surmounted by the letters N.U.P.S.A. This was thought to be quite suitable for a badge, a letterhead and the pocket for a blazer (the colour of which would be green).

The council felt that owing to the work entailed in organising a Congress the States should be given two years' notice — thus Congress 1958 will be in Queensland and 1959 in Western Australia.

Election of Officers.—At the end of this first week, the annual election of officers for 1957 took place. The new executive is as follows—

President—Frank Payne, New South Wales.

Vice-Presidents—Industrial and Educational: Russell Hardidge, Victoria. **International**—Hadyn Savage, Victoria.

Secretary—Lory Lightfoot, Queensland.

Treasurer—Heather McLean, New South Wales.

National Publicity Officer—Margaret Whittle (Western Australia).

Visitors were welcomed to the open afternoon on the Sunday and we were pleased to have at the camp

visitors from the College of Pharmacy, as well as three N.U.P.S.A. foundation members.

V.P.S.A. had organised a very full and extremely varied social programme. During the first week there was a day tour to the Eildon Weir and a barbecue at the camp. Many of the Congressists attended a dance in the local hall, where some pharmacy students were rather abruptly introduced to an echidna.

The interstate visitors were guests of members of V.P.S.A. for the second week.

On the Monday evening the Pharmaceutical Society of Victoria entertained all visitors at a dinner dance at "South Pacific." We all greatly appreciated this gesture by the Society.

Tuesday we were shown the Melbourne College of Pharmacy and then taken to the Commonwealth Serum Laboratories, where the manufacture of penicillin, various vaccines and anti-toxins and the Salk vaccine was seen. This was most interesting, although a few were heard to express disappointment at not having seen the monkeys.

On Tuesday night the V.P.S.A. committee arranged a most enjoyable evening, an informal dance at Bentleigh Coppins.

On Wednesday the students were the guests of the Guild at a luncheon at Guild House and we are all extremely grateful at being given this opportunity of seeing Guild House.

The dinner held on Thursday night at the Hotel Federal was a great success. On the Friday a tour to Anglesea was organised, where a restful day was spent on the beach by all, except the Queenslanders, who were trying to find the surf.

Thus terminated two most enjoyable weeks and the visitors are extremely grateful to V.P.S.A. for their hospitality and organisation, which produced a truly wonderful Congress.

—Margaret Whittle, National Publicity Officer, 21 Beatrice Road, Dalkeith, Western Australia.

STUDENT EXCHANGE

A Statement by Mr. H. van der Meer, Buitenruststraat 4, Leiden, Holland, Chairman of the International Pharmacy Students' Federation Student Exchange Committee

Lectori Salutem,

Once more may we draw your attention to the existence and the progress of the Student Exchange scheme of the IPSF. During the last two years Student Exchange has been improving considerably after a difficult period of getting started.

In 1955 about 30 exchanges were effected. In 1956 more than 50 students have been able to work in a foreign pharmacy by means of the scheme. These figures show that there is a hopeful improvement in the situation of Student Exchange. However, the exchanges have until now been excessively limited to a few countries, and in order to have a sound base for the future many other countries must be added to the list.

So far, only England, Finland, Germany and Yugoslavia have been seriously involved in the programme, and one Italian and three American students received places in Germany. In order to make Student Exchange really successful it is necessary to obtain places in France, Italy, the Scandinavian countries, Switzerland and the United States. Last year there were 35

applicants, most of them for the last-mentioned countries, whose expectations were not fulfilled because there were no places available. Student Exchange can only be a success if there is more interest in these countries on the part both of the pharmacists and the students. A start should also be made with exchanges in Australia, Belgium, Canada, India, South Africa and Turkey.

Again we give you the practical information on the scheme:

There are two categories of exchange students:

A. Students who wish to work in a pharmacy or hospital pharmacy for a period of one to three months.

B. Students who wish to observe the work in a pharmacy and the way of life of pharmaceutical students,

and three reception categories:

I. Pharmaceutical families where a parent is a pharmacist and a son or daughter is a pharmacy student. If the latter so desires, a direct exchange with the student being received will be made if possible (before or after the visit).

II. Pharmacists without sons and daughters in pharmacy who, nevertheless would be willing to allow a foreign student to work in their pharmacy.

III. Pharmaceutical students who are in a position to entertain foreign students. Again, if the host student so desires, every effort would be made to effect a direct exchange.

The students of category "A" must have completed a practical training of at least one year. Concerning category "B," it is possible to effect a direct exchange, so that in the same year or next year the host student can be invited in his turn by his guest.

The student will receive free board and lodging, mostly in the pharmacist's home, or a salary with which he can earn his living. For all students taking part in the exchange, health and accident insurance through the International Student Insurance Scheme (ISIS) is compulsory, since neither IPSF nor the employer can take any responsibility in this respect. Information on ISIS insurance may be obtained from the National Student Travel Office or from the Chairman of Student Exchange. Those who are already insured against illness and accidents abroad are exempted from this requirement.

The student must pay travel costs himself, but it may be possible to obtain a significant reduction through his National Student Travel Office. However, the student must make these arrangements himself. The student must pay a fee of £1 per month of the exchange towards the cost of administration, and a guarantee of £1, which will revert to the Student Exchange Committee in case of withdrawal within two weeks of the beginning of the exchange. The guarantee will be repaid after the receipt of a trainee-report.

Students must send their applications for the summer months at the latest on May 15 to the Chairman of Student Exchange or the Liaison-Secretary of their country, and for earlier exchanges at least two months before the beginning of the exchange.

The Liaison-Secretaries will send the completed forms immediately to the Chairman of Student Exchange.

Pharmacists are kindly asked, if possible, to adhere to the same dates.

Application forms for both pharmacists and students may be obtained from the IPSF-Liaison-Secretary or from the Chairman of Student Exchange.

The Student Exchange Committee expects a further increase of the number of exchanges for this year and hopes that its expectations may be fulfilled.

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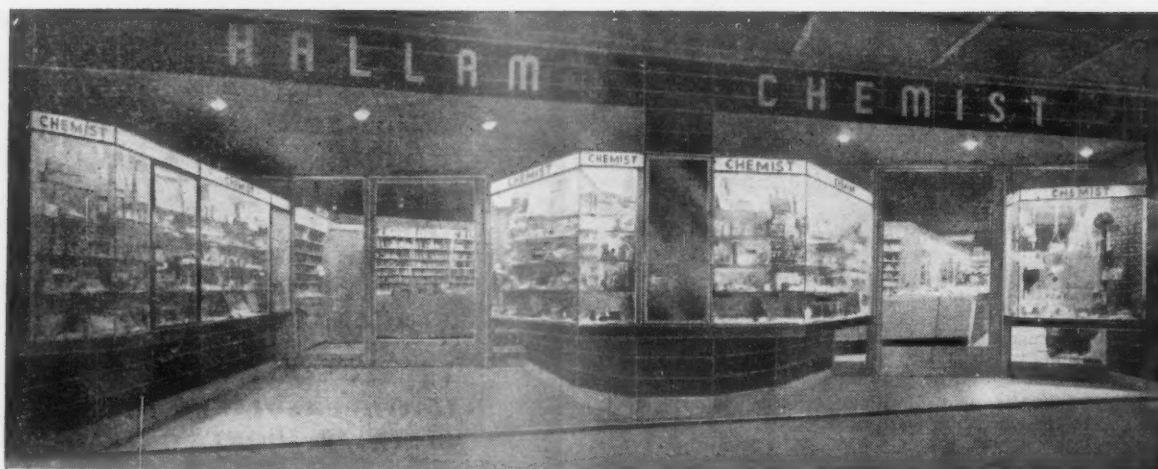
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Commonwealth and State News

NEW SOUTH WALES

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in N.S.W. 'Phone BU 3092.

A thought is parent to the deed.

—T. Carlyle.

Mr. J. J. Bryant has opened a Pharmacy at 11 Wentworth Street, Manly.

Mr. G. W. Ringrose has a new Pharmacy, Brighton and Oliver Streets, North Harbord.

Mr. J. D. Ada is now the proprietor of the Pharmacy at 64 Prince Street, Grafton.

Mr. W. J. Gow has a new Pharmacy in Port Hacking Road, Caringbah.

Mr. W. V. Hill has taken over the Pharmacy at 76 Elizabeth Bay Road, Elizabeth Bay.

Mr. R. A. Woodhill is opening a Pharmacy in Central Road, Unanderra.

Mr. F. J. Mackey has purchased the Pharmacy in Central Avenue, Oak Flats (South Coast).

Mr. A. R. Armstrong is opening a Pharmacy at 307 Pacific Highway, Lindfield.

Mr. Mark E. McFadden has purchased from Mr. P. S. Bevan the Pharmacy at 110 May Road, Narrabeena.

Mr. K. D. Jessep has purchased Hay's Pharmacy at 672 Pacific Highway, Killara.

Miss J. O'Leary has purchased the Mayfair Pharmacy, 114 Stoney Creek Road, Beverley Hills.

Mr. Adolf Knoll has purchased Mr. B. Sloane's Pharmacy, 66 Dalhousie Street, Haberfield.

Mr. J. P. Cooney, late of Parkes, has transferred to Queensland. He will open a new Pharmacy in Lennon's Building, Ruthven Street, Toowoomba.

Mr. G. V. Margetis has purchased the Redfern Pharmacy, 112 Lawson Street, Redfern, from Mr. George Rose.

Mr. G. C. Condon, late of the Town Hall Station, has purchased Mr. J. P. Cooney's Pharmacy at 247 Clarinda Street, Parkes.

Mr. B. J. Moore, formerly of Jerilderie, has now purchased Mr. Stewart F. Shearman's Pharmacy at 304 Summer Street, Orange.

PRESENTATION OF REGISTRATION CERTIFICATES

Registration Certificates will be presented to newly qualified Pharmaceutical Chemists at a ceremony in the Stawell Hall, Macquarie Street, Sydney, on Monday, April 15, commencing at 8 p.m.

ANNUAL MEETING OF PHARMACEUTICAL SOCIETY OF NEW SOUTH WALES

The annual meeting of the Pharmaceutical Society of New South Wales will be held in the Stawell Hall of the Royal Australasian College of Physicians, Macquarie Street, Sydney, on Thursday, March 21, 1957, at 8 p.m.

S. W. GAYFER BEQUEST ESSAY COMPETITION, 1956

A prize has been awarded to Mr. P. M. Green, of Bulahdelah, for his essay entitled "Atomic Energy Challenges Pharmacy."

The text of this essay is published elsewhere in the current issue of the Journal.

D.A.T.C.A. MEETS COMMONWEALTH COMMITTEE ON POISONS

On February 19, the Drug and Allied Trades Council met the Commonwealth Committee on Poisons to discuss the Poisons Schedules drafted by the Commonwealth Committee. The draft includes eight separate schedules. Deliberations continued all day.

DENTO-PHARMACEUTICAL LIAISON COMMITTEE

The first meeting of the Dento-Pharmaceutical Liaison Committee was held in the Hardwick Memorial Library, A.D.A. Office, B.M.A. House, 135 Macquarie Street, Sydney, on February 25. The Dental Members of the Liaison Committee are Dr. E. R. Magnus, Mr. E. J. Gee and Mr. R. L. Currie. Representatives for the Pharmaceutical Society of New South Wales are Mr. Brian Fegent, Mr. Ken Powell and Mr. Bert Cutler.

R.S.S. & A.I.L.A.

New South Wales Chemists' Sub-Branch

Combined Bowls and Golf Day and Anzac Dinner

The New South Wales Chemists' Sub-Branch will again conduct a combined bowls and golf day on April 11, at Concord, followed by an Anzac dinner at 7.15 p.m. Starting times for the golf and bowls are 10 a.m. and 10.30 a.m. respectively.

You will be welcome to participate in this day if you are an ex-serviceman, employed in wholesale or retail pharmacy, or an associated industry.

Participation is not confined to members of the above sub-branch only.

CHARGES RELATING TO PHARMACEUTICAL BENEFITS

A doctor and a chemist were committed for trial by Mr. M. J. McCauley, S.M., in Sydney, on February 15, on a charge of having endeavoured to impose on the Commonwealth to obtain money by making an untrue claim for payment for the supply of pharmaceutical benefits.

They are **Dr. Geoffrey Michael Hallinan**, of Ingleburn, and **Rupert Leslie Burrows**, trading as **Macquarie Pharmacy, Ingleburn**.

Both pleaded not guilty to the charge at the Court of Petty Sessions, Commonwealth Bank Building, Sydney.

Mr. McCauley allowed them each £100 bail, pending their trial at the Quarter Sessions.

The offence is alleged to have been committed in May, 1953, when Burrows presented for payment a claim for prescriptions dispensed by him during the previous month.

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QUEENSLAND: Drysdale's Chambers,
4 Wickham Street, Brisbane.
(Branch Secretary, Miss D. Brighthouse.)

SOUTH AUSTRALIA: Churchill Building (First Floor),
61-63 Gawler Place, Adelaide.
(Branch Secretary, O. H. Walter.)

WESTERN AUSTRALIA: C/o Technical College,
St. George's Terrace, Perth.
(Branch Secretary, F. W. Avenell.)

NEW SOUTH WALES—Continued

Mr. R. G. Reynolds (for the Crown) said the Crown alleged that Burrow's claim, made under the Pharmaceutical Benefits Act, was untrue.

He said the bulk of the prescriptions involved in the charge were written by Dr. Hallinan.

Most of them were for expensive life-saving drugs.

"Burrows's claim to have dispensed the quantities of life-saving drugs for which the Commonwealth was asked to pay was clearly false because he could not have had, and did not have, the drugs in stock in the quantities which he claimed," said Mr. Reynolds.

Mr. Reynolds said one allegation was that Burrows sought to be paid for 388½ more vials of chloromycetin than he had ever bought.

Cost of each vial then was £2/12/2.

Mr. Reynolds said both Burrows and Hallinan had claimed there was nothing intentional, criminal or improper about alleged discrepancies over drug records.

MEETING OF MID-NORTHERN PHARMACISTS' ASSOCIATION

The Mid-Northern Pharmacists' Association met in the Board Room of the Chamber of Manufactures, Bolton Street, Newcastle, on February 20, there being present H. A. Wallace, Harold Menson, Bill Palmer, M. N. Morris, I. D. Thomas, R. H. Turner, K. M. Schiemer, N. A. Lewis, S. B. Morris, D. A. Cruickshank, Barbara Thompson, Shirley Attwood, T. Blunden, F. Bignell, J. M. Borthwick, A. H. Leahy, C. Bridges, C. L. McCready, G. R. Hielscher, Anne Forbes, V. C. Giles, F. H. Evans, T. H. Evans, S. H. Evans, S. J. N. Hibbard, R. A. Donald, A. J. DeFina, J. J. Truscott, J. P. Matthews, R. W. Fennell, Gregory A. Bell, Colin Glass, A. R. Walden, P. Gallagher.

Sydney representatives were Messrs. W. F. Pinerua, Vice-President of the Guild, and A. E. Connolly, Secretary.

Opening the meeting the President of the Zone, Mr. Neil Smith, extended a welcome to the Sydney visitors.

Outward correspondence was then read.

Shares in Pharmacies.—A member said he was of the opinion a chemist could not hold a share in another pharmacy unless it was established prior to the insertion of Section 18 (b) into the Pharmacy Act.

Another member said that someone had been round saying, "Turn your pharmacy into a company and save taxation."

Another member said that the Friendly Societies had opened shops in private names at Canterbury and Campsie.

Mr. Pinerua's Address.—The President then called on Mr. Pinerua to address the meeting. Mr. Pinerua said that the visit to the regular meeting of the Association had been to inform members of the agreement reached by the Guild with the company pharmacies in the matter of pricing of prescriptions. Mr. Pinerua then gave confidential information on this score.

A member enquired—"Did the arrangement apply to the company groups in Newcastle?"

After considerable further discussion Mr. Sam Morris moved that the State Branch Committee be congratulated on its successful negotiations with the company pharmacies. He also moved that this meeting offer its loyal support to the Guild and its sincere congratulations. The motion was seconded by Mr. Neville Lewis and carried by acclamation.

Mr. Norris, of Parke-Davis & Co. Ltd., then gave concise information regarding the radio programme to be broadcast throughout Australia. Mr. Harold Menson conveyed congratulations to Parke-Davis and offered the whole-hearted support of the Zone. Mr. Pinerua

said to Mr. Morris, "I also congratulate your company on behalf of the Guild."

After many other subjects had been talked over, the meeting came to a close at 11 p.m.

RETURNED SAILORS, SOLDIERS AND AIRMEN'S IMPERIAL LEAGUE OF AUSTRALIA

N.S.W. Chemists' Sub-branch

The tenth annual report of the Sub-branch for the year 1956 was presented at the annual meeting on February 2, when the election of officers resulted as follows:—

President: A. W. Macourt.

Vice-Presidents: C. Willis, J. Gill.

Hon. Secretary: G. Bruce.

Hon. Treasurer: N. Bridgefoot.

Assistant Hon. Secretary: B. Croft.

Legacy Representative: D. Ford.

Publicity Officer: F. Little.

Committee: W. Pretty, J. Rackham (Publications), A. Ball, R. Austin, S. Palfreyman (Overseas), R. Blackett, R. Welladsden.

Hon. Auditors: H. Taylor, W. Moore.

Intra-Mural Delegates: A. W. Macourt, R. Barbuto.

Alternate I.M. Delegates: W. Pretty, B. Croft.

Congress Delegate: F. Little.

The report of the President and the Secretary stated that they felt that this has been a particularly successful year in many aspects—an increase of membership by 16; an increased average attendance at general meetings; some memorable social activities.

"Na Brom."—Ten issues of "Na Brom" gave country members and those absent from meetings a monthly account of sub-branch doings. Frank Little had given them some enjoyable reading and "its pungent humour is a tonic in these times."

Lectures.—During the year members enjoyed an illustrated lecture by Basil Croft on a "Ramble through Japan and Korea."

We breezed merrily along with Brian Chaseling for three nights almost as if we were with him and his fabulous companion and motor bike, on his adventurous trip to Europe. This lecture was one of the highlights of the year.

Stan Palfreyman on still another night entertained us with his impressions of Britain and Europe.

Special Activities.—Sale of Legacy buttons and Poppies organised by David Ford resulted in the sums of £90 and £81 respectively being raised; in addition, the sub-branch renewed its adoption of a Legacy Ward.

Social Activities.—It was in this sphere that the sub-branch really did something. Firstly, Stan Palfreyman was farewelled in a fitting fashion at Adams Hotel, on the eve of his departure overseas. This was followed by a combined bowls and golf day and the Anzac dinner. Anzac dinner has always been one of the most successful functions of the year; this year the outgoing Committee left us with a legacy to start our Anzac Day celebration with a golf and bowls day prior to the usual dinner; venue was the Lakes Golf Club. Instrumental for the organisation were Ralf Bray and his Committee. Seventy-odd golfers and bowlers and 110 at the dinner. "Na-Brom" editorial comment—"I personally think that that the day was something really out of the box and represents a milestone in the activities of the sub-branch." It appears it will become an annual affair as in the coming year it is intended to hold a similar day at Concord Golf Club.

The Ladies' Night held at Florida House was a memorable night amidst pleasant surroundings with pleasant company. Christmas Night, as usual, was celebrated in a fitting fashion.

The report concluded: "We thank the members of the Committee and those many members, who were always so ready to help, for the support they have given dur-



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AUSTRALIA

NEW SOUTH WALES—Continued

ing the year. Thinking of the year to come we wish to remind you that many of the Executive have held varying positions in the sub-branch since its foundation, but none of these would be more than willing to see new faces amongst the 1957 office-bearers. Those volunteering for positions will not be thought to be seeking office, but rather showing their willingness to share responsibility of keeping the sub-branch going. We wish the new Executive and Committee every success and know they will be given the loyalty that has been accorded to us throughout our term of office."

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of New South Wales met at "Science House," 157 Gloucester Street, Sydney, on February 5, at 7.45 p.m.

Present.—Councillors B. G. Fegent (Chairman), E. G. Hall, K. A. Cartwright, H. W. Read, S. E. Wright, J. F. Plunkett, K. H. Powell, A. F. Winterton, W. R. Cutler, G. G. Benjamin, and Mavis Sweeney.

Welcome to Professor Wright.—The Chairman welcomed back "our wandering Councillor." Having had 14 days with him in New Zealand, he had heard all the most interesting events which had taken place overseas.

Mr. Fegent: "I will welcome you back to Australia and hope that your overseas visit will help your deliberations with us. Further, I convey to you our sincere congratulations on your appointment as Associate Professor of Pharmacy." (Applause.)

Professor Wright: "Thank you very much for your good wishes. I received a very nice letter when at Minneapolis; it was the first intimation I had received of my Associate Professorship. I hope that the experience I have had will be of assistance to the Council."

Medico-Pharmaceutical Liaison Committee.—Report of meeting held at B.M.A. House on January 10. List of restricted drugs which are prescription only under Schedule 3, Poisons Act, to be sent to the B.M.A. Concerning labelling of restricted drugs dispensed, it was approved for the Society to join with the B.M.A. in application for repeal of the regulation requiring containers to be labelled "to be used by the patient only, and strictly as prescribed."

Restricted Drugs Prescribing Regulations—Proposed Precs.—It was decided to support the proposal in principle and to assist with publication of the prec. To be further discussed by the Medico-Pharmaceutical Liaison Committee. The matter of the proposed Advisory Committee under the D.D. Act was also to be relisted for discussion by the Liaison Committee.

Annual General Meeting, 1957.—Thursday, March 21, in the Stawell Hall, Macquarie Street, Sydney, at 8 p.m.

It was mentioned that the Dulwich Hill Zone had decided to hold a meeting on March 21 also. Mr. Audley it to be asked to postpone this meeting.

In reference to the prize for first-year botany students, it was decided to award the sum of £5 to each. Prizes to be in books.

With reference to the first-year apprentice prizes, the sum of £6/6/- is to be divided between the three who equalled for first place.

Science Conference—New Zealand.—Mr. Fegent said the Conference was more satisfactory than most. The papers contained more solid material for practical phar-

macy, also the teaching staff and the manufacturer. There was a good attendance at all sessions. Professor Wright said that 80 were registered at Section "O," with 2,000 at the Conference. The Pharmaceutical Society of New South Wales had made a useful contribution towards education in New Zealand.

Presentation of Registration Certificates and Prizes.—

Mr. P. E. Cosgrave wrote on January 23, advising that any evening subsequent to April 9 would be suitable for the ceremony. The Secretary said that the Stawell Hall had been booked for Monday, April 15.

S. W. Gayfer Bequest—Essay Competition, 1956.—The three adjudicators considered that the essay submitted by Mr. P. M. Green, of Bulahdelah, entitled "Atomic Energy Challenges Pharmacy" was worthy of a prize. It was decided to award a prize of £10 and to forward the essay to the "A.J.P." for publication.

Programme for 1957

Presentation of Registration Certificates.—First Ceremony, Stawell Hall, April 14.

Annual Dinner.—Date to be fixed.

Country Visits.—To be discussed in collaboration with the Guild.

Pharmacy Ball.—Monday, August 12, pencilled, at the Trocadero.

Annual General Meeting.—Thursday, March 21.

Post-graduate Lectures.—It was suggested that instead of holding post-graduate lectures similar to last year, that Council revert to a series of lectures held under the aegis of the Science Group.

Science Group Lectures.—It was suggested that Dr. Listwan should be requested to give a lecture on the Tranquillising Drugs; also, Professor Thorp, on the subject of the International Pharmacopoeia.

Children's complaints—talks on infant care.

Essential oils, by Mr. Morrison.

A further suggestion was—Questions asked in the Pharmacy: Why do you use Sugar of Milk; When do you use Sodium Citrate?

It was finally decided that a programme of six lectures be submitted at next meeting, indicating appropriate lecturers. Lecturers to be held at monthly intervals under the sponsorship of the Science Group, no charge for attendance.

Refresher Lectures, 1957.—Professor Thorp advised that the stencils would be ready soon for duplicating.

News Sheet.—Mr. Powell said that Professor Trehowan had promised to send in an article to the Office. Mr. Hall referred to the requirements concerning the contents of First-Aid Kits and suggested information be published in the Digest.

New Members Elected

Full Member.—John Bruce Mead.

Advanced to Full Membership.—Brian Harold Fogerty.

Associate Members: Ross McArthur Cameron, Anthony W. F. Griffin, Robert Joseph Kemp, Noelene Florence Stobbs, Frank Arthur Swavley, Mrs. Marie Alt, and Oroya Charles Grabham.

Reinstatement.—Oswald Claude Bennett.

Correspondence.—From Mr. A. W. McGibbony, conveying to the President and Councillors sincere thanks for their congratulations.

From Mr. John L. Townley, conveying thanks of wife and self to Council for farewell function and gifts.

From Mr. H. D. B. Cox, conveying appreciation for kind message.

From Dr. John Hunter, acknowledging congratulatory letter.

Association of Women Pharmaceutical Chemists of New South Wales—letter of February 1, dealing with establishment of a "Poisons Information Centre." It was decided to relist the matter for discussion at next meeting.

The meeting closed at 11.5 p.m.

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NEW SOUTH WALES—Continued

THE GUILD

**S.B.C.
Meeting**

A meeting of Trade and Commerce Sub-Committee of the N.S.W. Branch of the Guild was held at "Science House," Sydney, on February 7, at 8 p.m.

Present.—Messrs. K. W. Jordan (Chairman), R. S. Leece, K. A. Cartwright, J. N. Young, C. D. Bradford and A. E. Conolly.

Ipana Month.—Mr. Jordan said he had discussed the matter of the Ipana Sales Drive with Dr. Oxenham. Mr. Jordan then produced samples of showcards, a wire basket being not yet to hand. It was thought that a small showcard would be more suitable, showing the child who had lost a front first tooth. It was decided to commence publicity in the Guild Service Bulletin about the middle of February; articles to be published also in the "Gilseal News."

Dettol and Steradent.—Mr. Jordan said the Guild/Reckitt & Colman Sales Drive had now been transferred from February to April. Reckitt & Colman were really going ahead. For the picture nights they had engaged two halls at the University. They would produce plenty of display material. It was decided to recommend that the State Branch Committee instruct Mr. Coad to advise chemists that Dettol Month is coming up. He could either deliver certain display material or take the names of chemists requiring material and send a list to Reckitt & Colman.

Discounts—Public Service Association—Approach to Chemists at Maitland.—The Secretary said that a member had phoned stating that the Public Service Association was touting for discounts in the Maitland area—"you will get all the business from our 250 members if you cut prices by giving discount." Consequently letters had been sent to all Guild members in Maitland pointing out that the giving of a discount is directly opposed to Guild principles. No further word had been received.

Mark-Up—"Nestargel."—The Federal Secretary wrote, forwarding a letter from Nestles, stating that the trade price of "Nestargel" will be 12/- per jar and the consumer 18/- per jar, operative from January 2, 1957.

Price Cutting.—Gillette Razor Blades, Ford Pills, Weat Harts and Kolynos:

Regarding Gillette Razor Blades, the Bridge Super-Market, 336 King Street, Newtown, had been cutting Gillette Blades to 2/-. On January 16 the Gillette Safety Razor Company reported that the matter had been investigated and the proprietor had agreed to adhere strictly to the list price.

Regarding Ford Pills, these were being cut by the Bridge Super-Market to 2/6. The matter had been reported to British Medical Laboratories. The Company had taken up the matter in conjunction with the P.A.T.A. Mr. Jordan said he had phoned Mr. Les Fox about the matter.

Weat Harts.—Mr. R. O. Birch had reported the cutting of Weat Harts by Bourke's Cash and Carry Store at West Ryde to 3/4. The matter had been referred to Provita Products Pty. Ltd.

Kolynos Toothpaste.—Cutting of Kolynos Toothpaste by Bourke's to 2/4 had been reported to the Whitehall Pharmaceutical Company.

Yardley Teen-age Club.—The Federal Merchandising Service wrote, forwarding circular in respect of the Yardley Teen-age Club posted to all members. It was reported that the book "Junior Miss" was selling well. Yardley's had made arrangements to bring out further stocks from Great Britain.

Vaseline Wonder Foam Shampoo—"New Wonder Formula."—Mr. Jordan said that the introduction of the new product following a special buy on the old line was referred to P.C.D. Pty. Ltd., which Company reported that the special deal was in May, 1956, not a short time ago.

Nada Toothbrushes.—Mr. Jordan said there had been a complaint about the colour range and Mr. Ross took it up with Mr. Bligh-Jones. Since, there had been a great improvement in the colour range. Mr. Jordan had suggested to Mr. Bligh-Jones that he should bring out a bonus deal during the Ipana Month, but he said it was too soon. It was decided to publish a paragraph in the Guild Service Bulletin concerning the added colour range in Nada Toothbrushes.

B.W.'s Zincofax.—Mr. Jordan referred to a paragraph in B.W.'s Bulletin, stating that Zincofax was being detailed through Baby Health Centres. He had phoned Mr. Hellman, commending this move.

COMMONWEALTH

PERSONAL and GENERAL

P.D.L. FEDERAL COUNCIL MEETING

The 13th Annual Meeting of the Federal Council of Pharmaceutical Defence Ltd. was held at 18-22 St. Francis street, Melbourne, on February 20, 1957, at 9.30 a.m.

Present.—Mr. E. W. Braithwaite (Victoria) Chairman, Messrs. C. C. Wallis, E. A. O. Moore, F. N. Pleasance, N. C. Cossar, I. H. Barnes, J. W. Pollock and T. G. Allen, General Secretary.

Chairman and Vice-Chairman.—The General Secretary reported that a ballot in accordance with the by-laws had resulted in the re-election of Mr. E. W. Braithwaite as Chairman and Mr. H. D. B. Cox as Vice-Chairman.

Members of the Federal Council for the Council year 1956-57 are: Messrs. E. W. Braithwaite (Head Office), H. D. B. Cox (N.S.W.), W. A. Lenehan (Qld.), D. Finlayson (S.A.), and R. I. Cohen (W.A.).

Death of Mr. H. D. Fitch.—The General Secretary reported that Mr. H. D. Fitch, who had been the earlier nominee of the W.A. Branch, had died on February 5.

The Chairman said the untimely death of Mr. Fitch had come as a blow to them all. Some of them had met Mr. and Mrs. Fitch for the first time during their visit to Melbourne last year for the conference. Mr. Fitch had made many useful contributions to the conference proceedings, and he was greatly liked by the delegates from all States. A telegram of sympathy had been forwarded to Mrs. Fitch. The Chairman then moved that a letter of sympathy be forwarded to Mrs. Fitch as from this meeting, and that an expression of regret be conveyed also to the Western Australian Local Board of P.D.L. The meeting resolved in accordance with the Chairman's suggestion.

General Business.—Proxies having been forwarded by the interstate representatives, the meeting authorised investment of funds available from surpluses of the year 1955-56. On the suggestion of the Hon. Treasurer (Mr. N. C. Cossar), authority was also given for the investment, when it should come to hand, of a sum of £735/2/- due from the N.S.W. Branch, but not received at the date of the meeting.

The meeting then adjourned.

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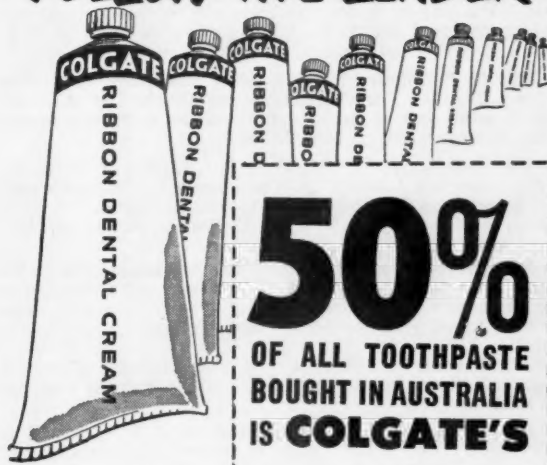
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QUEENSLAND

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in Queensland, Miss D. Brighouse, 'phone B 8407.

Mr. W. C. Balzer has returned to Cairns after holidaying in Brisbane, Sydney and Melbourne.

Mr. P. G. Cominos, of Cairns, paid a visit to Brisbane prior to opening his pharmacy in his home town.

Mr. C. F. Regan, of Brighton, has opened a branch at North Road, Brighton.

Mr. R. A. Sawyer, of Apsley, has opened his second branch at Loftus Street, Deagon.

Mr. J. L. Waller, of Holland Park, has established his branch at Seville Road, Holland Park.

Miss M. Schneider has taken over the management of the pharmacy conducted by her late father at Mitchell.

Enjoying a holiday from the West was Mr. A. V. W. Rymer, of Charleville. During his absence, Mr. J. G. Kellas was acting as locum.

Mr. L. G. Godlonton has sold his pharmacy at Nerang Street, Southport, to Mr. W. C. Watkins, formerly of Mundubbera.

Mr. Eric Gee and Mr. H. D. Waples have purchased the pharmacy conducted by Mr. H. V. Howe at Redcliffe.

Mr. C. R. S. Hill, who was in business at Tewantin for a number of years, has returned to Queensland and has purchased Mr. L. G. Cristaudo's pharmacy at Griffiths Street, Coolangatta.

Mr. O. F. Sibbles has opened a pharmacy at Grange Road, Grange. The pharmacy he established at Murrarie 15 months ago is being conducted as a branch under the management of Mr. T. Parer.

Marriage.—At St. Matthews' Church of England, Sherwood, on January 26, the marriage was celebrated of Miss Joan Martin, Ph.C., to Mr. L. Rudd, Ph.C., of Murgon, formerly of New South Wales. Congratulations and good wishes for the future.

Obituary.—It is with regret that we report the death on January 24 of Mr. H. E. Barnes, who conducted a pharmacy for many years at Charleville and more recently had been interested in the pharmacy at Cunnamulla. Mr. Barnes was a Life Member of the Pharmaceutical Society, having been a member for 47 years. Sincere sympathy is extended to Mrs. Barnes and her family in their bereavement.

Miss Norah Roberts, of Bardon, recently returned to Brisbane after three years of travel in England and Europe. During her stay overseas, Miss Roberts spent 11 months in Europe and two years in England, with her headquarters in London, where she relieved at various pharmacies.

ENGAGEMENTS

Engagements of interest in pharmaceutical circles announced during the month included those of—

Mr. H. Goodson, of Coe Bay, Yeppoon, whose fiancée is Miss Lenore Clarke, also of Yeppoon, and

Miss Wendy Marshall, of Toowong, whose fiancé is Mr. John B. Christie, also of Toowong.

GOLF

The Queensland Chemists' Golf Club announce that the Australian Chemists' Golf Championship will be played in Queensland for the first time, from April 28 to May 4.

The competition will be over five days, and during the carnival chemist golfers will play at Brisbane Golf Club, Gailles, Royal Queensland and at Tweed Heads-Coolangatta.

At the annual meeting of the club, held on February 5, the following office-bearers were elected:

President: Mr. J. C. Wheeler.

Vice-President: Mr. A. Asprey.

Joint Secretaries: Messrs. C. C. Noble and W. Fitzgerald.

Treasurer: Mr. R. S. F. Greig.

A/Handicapper: Mr. E. Nicholls.

Committee: Messrs. M. Lawton, B. Benjamin, M. Lyne, J. Dowling and J. Lehmhase.

CHEMISTS' BOWLING CLUB

The seventh annual meeting was held at Drysdale's Chambers on January 24, when the following Office-Bearers were elected:

President: Mr. Lou Hall.

Vice-President: Mr. G. Nolan (Senior), Dr. S. H. Waters (Junior).

Secretary: Mr. R. M. Ward.

Treasurer: Mr. A. Allison.

Selectors: Messrs. A. J. Monahan and A. Bell.

An invitation has been received from the New South Wales Club to play Interstate games in that State from October 13-19. Queensland has accepted the invitation of New South Wales and it is hoped that the State side to visit Sydney in October will be representative of chemist-bowlers throughout the State.

Sunday afternoon games have been arranged for Nundah on February 24 and at Ipswich on March 17. The first mid-week game will be played at Windsor on March 13.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the Queensland Branch of the Guild met at Drysdale's Chambers, Brisbane, on February 7, at 8 p.m.

Attendance.—Messrs. W. A. Lenehan (President), C. A. Nichol, W. E. Martin, F. H. Phillips, L. Hall, L. W. Huxham, R. M. Ward, A. B. Chater, A. Bell, J. J. Delahunty and the Secretary.

Bereavements.—The President said it was with very deep regret that he had to report the death of two leading personalities in Pharmacy since the last meeting. He referred to the late Mr. Fred Lee, President of the Victorian Branch of the Guild, and Mr. Harry Fitch, of Western Australia, President-Elect of the Pharmaceutical Association of Australia.

Mr. Lenehan said both these men had given of their very best in their service to the profession. Mr. Lee was best known to Committee members because of his active association with the Guild. He was a faithful and vigorous worker on behalf of the Guild. He had been at "Guild House" on the day of his death and passed away suddenly in the evening. He was a com-

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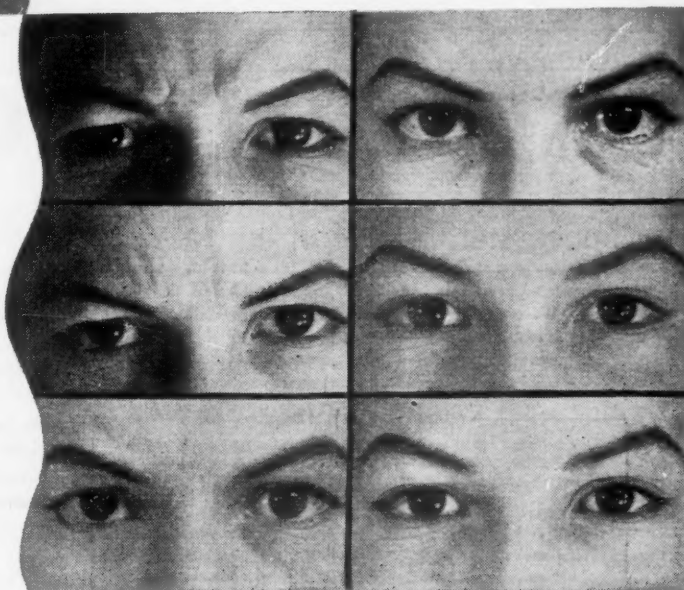
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QUEENSLAND—Continued

paratively young man and his passing would be keenly felt in pharmaceutical circles throughout the Commonwealth. Mr. Lenehan said it was hard to believe that Fred Lee was no longer with us.

Those who had attended conferences had had the pleasure of meeting Mr. Fitch. He, too, was comparatively young, was held in very high regard, and his passing would be particularly felt in his own State.

Mr. Lenehan said letters of sympathy from this Branch had been sent to Mrs. Lee and Mrs. Fitch. He then asked those present to stand in silence as a token of respect to their friends who had passed on.

Mr. Delahunty said he regretted to report that **Mr. Bob Riddell** had died suddenly during the day. He had many friends among the profession in this State, and he thought it would be fitting if a letter of sympathy from the Guild was sent to Mrs. Riddell. The Secretary was requested to do this.

Report on Retail List.—Mr. Bell reported that he went to Sydney on January 15 and met Miss Linnane, who is in charge of pricing in New South Wales. Miss Linnane and he worked on the preparation of the new list for three days. There were quite a number of improvements, which he enumerated, and which he felt should be made known to our members when the list was distributed to them. There was a tremendous amount of work in the preparation of such a list. The full support and co-operation which he received from Miss Linnane was a great help. In future there would be only one list of alterations and additions, which would be Queensland only, issued every two weeks. The list should be ready for distribution not later than February 19.

Mr. Lenehan said it was a very good idea to let members know the improvements featured in the new list. Mr. Bell, in collaboration with the Secretary, would issue this information to members. Mr. Lenehan said he would like to thank Mr. Bell for making the trip to Sydney and for all his hard work in connection with the preparation of the new list. He felt certain that the new issue would be greatly appreciated by all members.

New Members Elected.—Miss M. M. Schneider, Mitchell; Messrs. C. W. Watkins, Southport; C. R. S. Hill, Coolangatta; and C. Caris, Bundaberg.

Branch Pharmacies.—Mr. C. F. Regan, North Road, Brighton; Mr. R. A. Sawyer, Deagon Pharmacy, Loftus Street, Deagon; Mr. J. L. Waller, Seville Road, Holland Park; and Mr. O. F. Sibbles, Queensport Road, Murrarie.

Correspondence.—To Mrs. Fitch, Mrs. Lee and Mrs. Barnes—conveying to them sympathy in their bereavements.

To Taxation Standing Committee, advising that Messrs. R. M. Ward and L. W. Huxham have been appointed Guild representatives for the ensuing year.

To Messrs. L. A. Hodgson, N. E. Edmiston and J. L. Waller, congratulating them on their success in the Guild-Colgate Display Competition at Christmas time.

From Guild Merchandising Service: (1) Forwarding copy of Johnson & Johnson's President's report on public relations to the American Drug Manufacturers' Association. It was agreed that this be left in the hands of Mr. Delahunty, Chairman of the Trade and Commerce Sub-Committee for perusal and report thereon. (2) Advising that Reckitt & Colman (Aust.) Ltd. has now accepted April as the month for the "Dettol" and "Steradent" drive.

From Pharmaceutical Society of Queensland, advising that the Council is willing to have an interchange of Guild and Society Committee members at the monthly meetings as suggested by Mr. Nichol at the annual Society meeting. After discussion, it was agreed that an invitation be extended to one or two Society members to attend the next State Branch Committee meeting.

Federal Delegate's Report.—Mr. Martin said most of the material he had to bring forward had been dealt with in correspondence. Mr. Martin said the Parke-Davis broadcasting campaign should give wide coverage throughout Queensland. There were some blind spots not touched by the campaign. Material could be supplied to chemists in these areas, in case they wished co-operatively to publicise the information. However, on the whole, he felt the majority would gain by the broadcasting.

Liaison Meetings.—The President reported that the Liaison Committee had met in January, and the February meeting was held earlier in the week. Copies of the minutes were available for the perusal of members. Mr. Lenehan said it was pleasing to know that there would be a Pharmacy Supplement in the "Telegraph" on March 28. It should prove a boost to customer traffic. Mr. Lenehan asked members to give this matter some thought as any suggestions would be welcomed by Mr. Attiwill.

Medical Benefits.—Mr. Nichol said he considered that five per cent. commission was not good enough for the time it took to deal with Medical Benefit business.

Mr. Hall said he did not favour the fund soliciting advertisements from chemists to be featured in the supplement which is appearing shortly in the Press. He felt that the fund should advertise collectively for all their chemist agents.

Mr. Lenehan said the Guild's advice to members in the past was to please themselves whether they advertised in the supplement or not. That advice still stood.

Mr. Nichol said he felt that representation should be made to the Medical Benefits Fund for them to publish a complete list of their chemist-agents in the supplement, the cost of same to be borne by the Medical Benefits Fund. He moved that an approach be made to the Medical Benefits Fund along those lines. Mr. Delahunty seconded Mr. Nichol's motion, which was carried.

Report on Repatriation Dispensing.—Mr. Lenehan said a member had reported to him that he had been paid for his December account, but his November account had not been paid. He telephoned the Repatriation Department to enquire why, and he was told—"Yes, you are a group of chemists that has not furnished information as to the name of tablets, strengths supplied, etc. Accordingly, prescriptions concerned will be priced on the cheapest brand available and smallest strength." The officer reported that too many chemists were doing this now, failing to notify the brand of tablet and strength supplied. Mr. Lenehan said he felt enquiries should be made of Federal Office if they can find out on whose authority such prescriptions are now being held and paid on the lowest price, instead of being sent back to the chemist concerned so that he can affix the correct information.

Other members agreed with Mr. Lenehan's suggestion and the Secretary was requested to communicate with Federal Office.

Appointment of Committee Member.—Mr. Lenehan said it would be necessary to fill the vacancy on the committee caused by the resignation of Mr. Noble. Mr. Phillips moved that Mr. Eberhardt be co-opted to fill the vacancy caused by Mr. Noble's resignation and that Mr. Eberhardt be advised accordingly. Seconded by Mr. Nichol. Carried.

Visit by Mr. Bristol, of Bristol-Myers.—Mr. Delahunty reported that Mr. Bristol, of the Bristol-Myers Company, who had come from overseas on a visit to Australia, was in Brisbane during the week, exploring the position as far as his company is concerned and during his visit he had called on him.

Chemists' Interstate Golf Tournament.—Mr. Chater reported that the golf tournament would be held in Brisbane from April 28 to May 4. This would be the first chemists' golf tournament held in Brisbane since before the war.

The meeting closed at 11 p.m.

SOUTH AUSTRALIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in S.A., Mr. E. F. Lipsham.

It is anticipated that Mr. L. McKenzie, of Victoria, and Miss K. Ward, of Great Britain, will be coming to South Australia in the near future.

The rise in the fares on British ships caused Mr. M. Bassett to switch to an Italian line and to embark early in February instead of much later.

Mr. W. Richards is now recorded as the manager for F.S.M.A. at Rosewater.

The Pharmacy Board of South Australia has appointed Mr. C. C. Moody as an inspector to assist in organisation as required by the Pharmacy Act.

Mr. L. A. McCaffery acted as manager for a week in February to allow Mr. R. Michael, of Glenelg, to have a short spell.

Mr. D. Warren has been managing for Mr. E. Hogben, of Cheltenham.

Mr. A. Williams looked after the pharmacy conducted by Mr. H. Flaherty, of Plympton, for two weeks in February.

Mr. R. Porra spent two weeks of the long vacation assisting Mr. K. S. Porter, of Albert Park, prior to embarking on an extensive research programme in the Biochemistry Department of the University.

Mr. G. Higgins writes from Boston, U.S.A., of buying a car to tour America.

Miss Heather Smith will be in charge of the pharmacy conducted by Mr. W. Ey, of Colonel Light Gardens, during the first weeks in March.

Mrs. C. Wilkins assisted Mrs. D. Maloney, of Kingswood late in January and also Mr. J. Stain, of St. Morris, early in February.

Mr. J. Pain started work again in the new year after his extended tour of Europe, when he managed the pharmacy conducted by Mr. J. Physick, in Hove, in the early weeks of February.

Mr. D. Coles acted as manager for Mr. R. Burge, of Edwardstown, during February.

Miss B. Martin spent the early part of February at the pharmacy of Mr. P. Garrett, of Malvern.

Mr. D. O'Reilly, of Ovingham, had a fortnight's holiday break on Kangaroo Island at the beginning of February. Mr. J. Daly acted as manager during his absence.

Mr. D. Cocks is now with Mr. J. Isaac in Victoria.

Mr. R. A. Anderson acted as reliever for the President, Mr. K. S. Porter, and the Treasurer, Mr. D. C. Hill, of the Pharmacy Board during February so that each could undertake their sections of the February supplementary examination.

Miss G. Stunell spent the latter part of January and the early part of February with Mr. T. Curnow, of Clarence Park.

Mr. P. Grummet started work after attending the N.U.P.S.A. conference in Melbourne by assisting Mr. J. Bird, of Fullarton, for three weeks.

Miss P. Roberts, from W.A., spent the end of January assisting Mr. J. Such, of Croydon, and February with Mr. D. Clappett, of Kilkenny, and Mr. J. Upton, of Glenelg.

Mr. B. White acted as manager in the early part of February for Mrs. M. Marshman, of Woodville.

Mr. Walter Huber was in charge of F.S.M.A. of Hind-

marsh at the end of January, during the absence of Miss P. Stanley.

Mr. H. Burlinson has visited Angaston and Strathalbyn to allow Mr. H. Young and Mr. R. Martin to have vacations.

Mr. B. Cawte provided a fortnight early in February for Mr. K. Frazer, of Trotter's Pharmacy, Payneham, to have a break from routine.

Miss M. Evans has been managing, in recent weeks, the pharmacies conducted by Mr. J. Upton, of Glenelg, and Mr. R. Fisher, of King's Park.

Miss M. Lister, who joined the S.A. Register from England, is managing the Croydon branch of F.S.M.A.

Mr. R. Billing, of Birks-Chemists Ltd., has been busy since obtaining his Diploma in Pharmacy in quietly achieving units in the course for a Bachelor of Economics. To date he has passed in Accountancy I, Law I, Economics I and Economics II. He intends to devote the academic year of 1957 to full-time study in Statistics I, Law II, Accountancy II and Economics III. He will then have three more units in front of him to accumulate the eleven required for his degree.

Mr. and Mrs. E. W. Scott left Adelaide on January 24 for Melbourne, to embark on a world tour, first to India, thence to England. A trip to southern Europe is to be covered before going to Scotland. Northern Europe is next on the itinerary before embarking for U.S.A. on the way home. Mr. J. Cornish will be in charge of the pharmacy in Keswick during Mr. Scott's absence.

Mr. R. A. Anderson, lecturer in the Pharmacy Department of the University of Adelaide, returned late in January from Dunedin, New Zealand, where he had been conducting meetings as President of Section "O" of A.N.Z.A.S. In July next he will leave by air for London and thence to Philadelphia, U.S.A. under the terms of the Pfeiffer Scholarship which he was awarded last year. He expects to return twelve months later by air over the Pacific route.

Bob Brice writes from London of touring for six weeks in Scotland and Northern England by car before picking up Ron Medlow in the Lakes District, and continuing through Wales, Cornwall and Devon. Bob then got a reliever's job in a small chain of about 30 pharmacies and has therefore moved about a great deal. He writes of the stereotyped dispensing and the long hours, but is very happy with the opportunity of meeting other "Colonials" in the student club where he is staying with George Landers and Bob Medlow. His next trip is to Austria for skiing and winter sports in Europe.

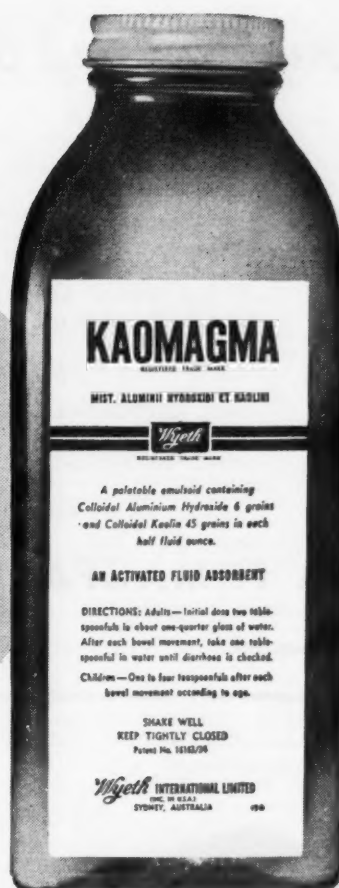
MARRIAGES

On January 19, in Clayton Congregational Church, Kensington, Kathleen Couch, daughter of Mrs. E. Couch and the late Mr. Couch, to Brian Frederick Mildren, son of Mr. and Mrs. W. H. Mildren, of Hawthorn.

Pamela Duval, daughter of Mrs. Q. R. Hood, of Rose Park, was married to Neil Prescott, son of Mr. and Mrs. S. P. Bannister, of Toorak Gardens, in St. Theodore's Church, Toorak Gardens, on February 9.

Miller—King. — Peggie, second daughter of Mr. and Mrs. E. L. Miller, of Rose Park, to David McMillan, the youngest son of Mr. and Mrs. E. C. King, of Prospect, at Scots' Church, North terrace.

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SOUTH AUSTRALIA—Continued

BIRTHS

Congratulations to the following:

Pickering.—To Glenyes and John, Memorial Hospital, January 20, a son (Ian David).

Simcock.—On February 9, at Northern Community, to Bess and Gerald, a son (Bryan Darryl).

Weller (nee Clayer). — To Pamela and Reginald, on February 13, at Calvary, a daughter.

OBITUARY

Wilkinson.—On January 11, at a private hospital, Adelaide, Charles Drew Wilkinson, late of Burra, aged 87.

Shetliffe.—On February 15, at hospital, Frank, husband of Gertrude, and father of Frank, Reg, Helen and Ruth. Aged 66 years. Late of 72 William Street, Norwood.

NEW REGULATIONS MADE UNDER THE DANGEROUS DRUGS ACT 1934-1955

Approved on January 17 and published in the South Australian Government Gazette.

The regulations made under the Dangerous Drugs Act, 1934-55, and the Consolidation of Regulations Act, 1937, on the 22nd day of September, 1937, and published in the "Government Gazette" of the 23rd day of September, 1937, at page 797, as varied from time to time, are herewith further varied as follows—

1. By inserting after regulation 11 thereof the following regulation—

"11A (1). The Board may serve upon any person authorised under these regulations to be in possession of any drug a notice in writing specifying the maximum quantity of any drug or drugs named in the notice which such person may have in his possession.

"(2) No person upon whom such notice in writing has been served shall at any time after the lapse of seven days from the date of service of the notice, and while the notice remains in force, have in his possession a greater quantity of that drug or those drugs than the maximum quantity specified in the notice.

"(3) The notice shall remain in force until cancelled by the Board."

2. Regulation 12 is amended by—

(1) Inserting after the word "shall" in the first line of paragraph (1) thereof the words "dispose of by wholesale or";

(2) Deleting clause (d) of paragraph (1) thereof and inserting in lieu thereof the following—

"(d) unless the following records are kept—

"(i) A register of stocks and sales of drugs in accordance with regulation 24 hereof, and

"(ii) A separate folio for each authorised person showing all quantities of drugs supplied to such person."

3. Regulation 23 is amended by inserting—

(1) At the end of paragraph III thereof the words: "In the case of a prescription issued in duplicate under the provisions of the National Health Act, 1953, or any other Act of the Commonwealth, both the original and the duplicate prescriptions shall be so cancelled."

(2) At the end of paragraph IV thereof the words "Provided that in the case of a prescription issued in duplicate under the provisions of the National Health Act, 1953, or any other Act of the Commonwealth, the duplicate prescription shall be forwarded in lieu of the original."

4. By deleting paragraph (1) of regulation 25.

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of South Australia met at 27 Grenfell street, Adelaide, on January 17, at 7.30 p.m.

Present.—Messrs. K. S. Porter, E. F. Lipsham, A. E. Bowey, L. A. Craig, D. C. Hill and the Asst. Registrar.

Election of President.—As the Board commenced a new term of three years, in accordance with the report of the Returning Officer, nominations were called for the position of President. Mr. K. S. Porter was the only nominee and was duly elected. He thanked members for the honour of electing him President for a further term, and stated he would continue to carry out the duties of the office to the best of his ability and endeavour to justify the confidence which had been shown in him. He thanked Mr. Lipsham in particular for the remarks which he had made when submitting the motion containing his nomination.

Election of Hon. Treasurer.—Reference was made to the duties previously carried out by Mr. G. L. Burns in this position, and regret was expressed at his inability to attend the initial meeting for the election of officers, due to illness. The President congratulated Mr. Hill on his election to the position of Hon. Treasurer, and the latter suitably replied.

Correspondence.—To Pharmaceutical Council of Western Australia, advising that little progress has been made regarding Uniform Poisons Schedules.

From Pharmaceutical Council of Western Australia, forwarding for this Board's information a copy of the letter forwarded by them to Mr. Torma regarding requirements for qualification in Western Australia.

From a lady pharmaceutical chemist, advising that her Standard Certificate had been stolen or destroyed by fire in London, and asking if it would be possible for her to obtain a duplicate. Resolved that as there is no power under the Pharmacy Act or Regulations for the issue of a duplicate Standard Certificate to replace one that has been lost she be advised to that effect and a letter incorporating details on the Certificate be supplied to her.

From and to Miss K. Ward and Mr. R. V. Davis, of Great Britain, regarding registration in South Australia.

Appointment of Additional Inspector.—To enable expeditious handling of inspections under the Pharmacy Act and Regulations, it was resolved to appoint Mr. C. C. Moody an additional Inspector of the Pharmacy Board on the same terms as those existing for Inspector Cotton.

Pharmacy and Poisons Act of Western Australia.—Mr. Bowey reported having examined the Western Australian Poisons and Pharmacy Act, which had been consolidated up to December, 1954. He submitted several points as being of interest to the Board.

P.A.A. Conference.—Letter to Pharmaceutical Association, advising that the copy of the letter from the Editor of the British Pharmaceutical Codex had been placed before the last meeting, and also acknowledging receipt of minutes of meeting of Executive of the Association.

Proposed memo to State Department of Public Health on suggestion submitted by Mr. Lipsham to the November meeting regarding special containers for poisonous tablets.—The President advised that he had consulted most plastic makers in Adelaide, but had not met with satisfactory results. He then conferred with Mr. K. D. Johnson, who had had experience in the use of particular stoppers on certain products. Mr. Johnson had



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SOUTH AUSTRALIA—Continued

advised that the caps in question had been procured from Australian Glass Manufacturers Co. Pty. Ltd., and after being told of the reason for the inquiry had offered to investigate the matter of caps and submit a report which could be placed before the Board by the President. Mr. Johnson's report covered three alternatives, and after discussion it was decided that the third method of standard size screw-on metal cap containing printing would be preferable. It was then resolved that a letter of thanks be directed to Mr. Johnson for the comprehensive report which he had submitted with a request that if he can see his way clear the Board would appreciate his continuing his negotiations with Australian Glass Manufacturers Co. Pty. Ltd. towards implementing the supply of standard size screw-on metal caps with red printing on a light colour (not white) background. Mr. Bowey then reported on printed notices to be fixed on the containers. After discussion it was resolved: (1) That this Board agrees with the principle of the use of both special labels and distinctive caps; (2) that with the idea of putting them into use a label be drafted for approval and distribution to pharmaceutical chemists, together with a memorandum advising the availability of distinctive caps; and (3) that the use of either or both caps and labels be left to the discretion of the individual chemists.

Apprentices.—Approval was given for the assignment of the indentures of two apprentices, and two copies of indentures were received for noting of completion. The Asst. Registrar's report on the present position relating to applications for admission to the Pharmacy Course in 1957 was received.

Cancellation of Indentures.—Three sets of indentures were received for noting of cancellation for various reasons.

Triennial Report.—The Asst. Registrar produced the completed Triennial Report, which publication contained revised information for pharmaceutical chemists on "Containers and Labels used in Dispensing," the latter being based on the new edition of the Galenical Note Book. The President, on behalf of other members of the Board, expressed congratulations to Messrs. E. F. Lipsham, A. E. Bowey and R. A. Anderson for the effort which they had concentrated into this new publication.

It was resolved that copies of the printed report be forwarded to other Boards and Societies having reciprocal arrangements with this State. Consideration of other bodies to whom copies should be sent was deferred to the next meeting.

Inspector's Reports.—A detailed report of his visit through the South-eastern districts of South Australia was submitted by Mr. Cotton. Routine inspections of 22 pharmacies and intermediate depots were carried out. The Asst. Registrar was authorised to take the necessary action to implement the matters mentioned in the report.

A preliminary statement containing an allegation of unprofessional conduct was received, and the Asst. Registrar was directed to seek further information.

A letter was received from a pharmaceutical chemist regarding a sign appearing on a general storekeeper's premises which indicated that the latter may be holding out as a chemist. It was resolved that the correspondence be forwarded to the Board's solicitors.

Labels.—Copies of reprinted labels were received from a chemist, who had undertaken to have them recast in a further reprint. The Asst. Registrar was directed to thank him for his co-operation in submitting labels which met with approval.

Advertising.—A newspaper containing an unusual quotation was received by the Board, and the Asst. Registrar was directed to forward a letter to the chemist concerned seeking an explanation.

Essential Equipment.—Additional reports were received from the Inspector covering premises at which apprentices had made trial arrangements to be apprenticed. The reports were considered, and those which were completed were approved and the others deferred pending further information regarding the procuring of the remaining equipment.

Finance.—Columnar statement for the three years ended December, 1956, for incorporation in the Triennial Report was submitted and adopted, together with statement for the month of December, 1956, and audited statement for twelve months ended December 31, 1956.

Changes in Register.—Mrs. N. J. Macleod, formerly N. J. Gerard; Mrs. A. F. Prowrie, formerly A. F. Bag-nall.

Death.—Mr. C. D. Wilkinson, Burra.

Practising Certificates.—Certificates of Identity were forwarded to the Pharmacy Board of New South Wales on behalf of Messrs. W. J. Nicholls and A. R. Williams, and to the Pharmaceutical Society of Great Britain on behalf of Miss M. D. Campbell.

Application and Statutory Declaration received from Miss P. J. Roberts, supported by Certificate of Identity from the Pharmaceutical Council of Western Australia. Approved.

To Pharmacy Board of New South Wales, forwarding Certificate of Identity on behalf of Mr. J. L. Davis.

Mr. F. K. Morsehead, of New Zealand, sought information in regard to registration.

Other Formal Business Dealt With.—Registration of premises, relieving appointments (33), and applications for re-registration of depots (10).

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of South Australia met at 27 Grenfell street, Adelaide, on January 8, at 7.45 p.m.

Present.—The President (Mr. A. A. Russell) in the chair, Messrs. D. F. J. Penhall, K. D. Johnson, E. F. Lipsham, B. G. Wandke, Miss Z. M. Walsh, and the Asst. Secretary.

Correspondence.—Formal correspondence received and acknowledged.

Letter from Mr. H. D. Fitch, acknowledging receipt of good wishes for his recovery.

To Mrs. A. Russell and Mr. A. E. Bowey, conveying best wishes for speedy recovery, and to Mr. C. A. Newson, expressing sympathy in recent bereavement. Acknowledgments received.

To Professor A. Killen Macbeth, conveying best wishes for the festive season and the New Year. Acknowledgment received.

Letter from and to Mr. H. H. Young re offer of gift for museum.

Women Pharmaceutical Chemists' Association.—Letter to Secretary, Women Pharmaceutical Chemists' Association, acknowledging receipt of letter of November 19, 1956, and advising contents noted.

Students.—Various reports on education matters were submitted by Mr. Lipsham and discussed in detail by

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SOUTH AUSTRALIA—Continued

the meeting. The necessary authority for execution was given.

Annual Prizes.—A report was received by Mr. Lipsham on behalf of the examiners, recommending that prizes be awarded as follows:—

First Year.—J. H. Hardy Prize (Elementary Pharmacy): Mr. K. J. Foreman. Patterson Memorial Prize (Top Distinction): Mr. D. J. Hyde.

Second Year.—Patterson Memorial Prize (Top Distinction): Miss R. J. Hewitt.

Third Year.—Patterson Memorial Prize (Top Distinction): Mr. T. J. Lockett. Parke Davis Prizes (Two Best Students at November Examinations): Messrs. T. J. Lockett and H. E. George.

Fourth Year.—

Gold Medal (Selected Subjects Over Full Course to Student of Distinction Standard): Miss H. B. Smith.

Silver Medal (Second Placing in Selected Subjects Over Full Course to Student of Distinction Standard): Miss M. Thomson.

Kodak Prize (Selected Subjects Over Full Course to Student of Distinction Standard): Miss M. Thomson.

N. H. Tonkin Memorial Prize (Top Student in Pharmacology): Mr. G. R. Goldsack.

Resolved that the recommendations covering awards be received and adopted.

Parke Davis Prizes.—Letter to Parke Davis & Co. Ltd., advising that names of recipients of prizes will be forwarded when available; telegram subsequently, advising names of winners.

Finance.—Statement for the month of December was submitted and adopted, and accounts totalling £2136/5/11 were passed for payment.

A.P.F. Revision Committee.—The Asst. Secretary reported that the existing committee consisted of:—Messrs. Walter C. Cotterell (chairman), D. F. J. Penhall, G. L. Burns, J. D. Duncan, A. C. Holloway, A. A. Russell, E. F. Lipsham, A. E. Bowey, K. D. Johnson, S. A. Downie, R. A. Anderson, A. G. Evans and J. U. Maxwell.

Consideration of the constitution of the Committee for the 9th Edition was deferred until the February meeting.

Letter to Pharmaceutical Association of Australia, advising that contents of copy of letter from Editor of the British Pharmaceutical Codex had been noted.

Half-yearly Meeting.—The Asst. Secretary reported that the half-yearly meeting would be held in the Shell Theatre, North Terrace, Adelaide, on February 18, 1957, at 7.45 p.m., and that he was preparing circulars containing notice of meeting and also invitation to students in the Third and Fourth years.

It was resolved that Mr. R. A. Anderson be approached and asked if he would address members present at the meeting on some impressions of his visit to Dunedin and the conduct of the Section "O" meetings of the Conference.

A.N.Z.A.A.S. Conference.—A letter was received from Mr. A. E. Bowey, Hon. Secretary of the local organising committee for Section "O" for the 1958 meeting, forwarding a copy of minutes of a preliminary meeting held on November 26, 1956. It was resolved that the minutes be circulated among members, who could then submit their views to a subsequent meeting. It was expected that there would be a further meeting of the sub-committee after the return of Mr. Anderson from Dunedin.

Adelaide Conference.—The Asst. Secretary reported that he was endeavouring to arrange a meeting of

members of the Board, Guild and Council for January 29, as a preliminary move towards the Adelaide Conference of the P.A.A.

New Members Elected.—Messrs. A. Bajorunas, J. S. Bertram, B. V. Cawte, J. W. Jackson, B. K. White, W. R. Huber and Miss G. M. Stunell.

Post-graduate Talks.—Mr. D. F. J. Penhall reported that he had now received the necessary data for forwarding to the "A.J.P." for publication as previously suggested, and the matter was well in hand. The report was received and noted. The Asst. Secretary was directed to place the 1957 programme on the agenda for the next meeting.

Portrait of Mr. E. F. Lipsham.—The Asst. Secretary reported that the painting had been completed and was in the process of drying, prior to the framing being carried out. Members who had seen the portrait expressed satisfaction, and it was resolved that Mrs. I. Erns be forwarded payment as agreed, with a message from the Council thanking her for the interest shown and the expedition with which the work had been carried out.

New Year Honour to Premier.—It was resolved that a message be forwarded from the Society to the Premier, the Honourable Sir Thomas Playford, congratulating him on receiving his knighthood from Her Majesty the Queen.

FEBRUARY MEETING OF THE COUNCIL

The Council of the Pharmaceutical Society of South Australia met at 27 Grenfell street, Adelaide, on February 5, at 7.45 p.m.

Present.—Mr. A. A. Russell (President) in the chair, Messrs E. F. Lipsham, J. R. Pickering, D. F. J. Penhall, B. G. Wandke, and the Asst. Secretary.

Correspondence.—From Sir Thomas Playford, acknowledging with thanks congratulations on the recent honour conferred upon him by H.M. the Queen.

From Pharmaceutical Public Relations Secretariat forwarding copy of a report by Johnson & Johnson's President to the American Drug Manufacturers' Association. The President reported on various aspects of the statement, and drew attention to the relevant portions which were adaptable to Australian conditions. He considered that all members should take the opportunity of reading the report, and the Asst. Secretary was directed to arrange for the circulation accordingly.

Students.—

Commercial Pharmacy.—The sub-committee, consisting of the President, the Vice-President and Mr. Lipsham, reported that arrangements could be made with Mr. R. C. McCarthy to undertake the section of the lectures which would deal with Commercial Law. It was resolved that authority be given to complete the proposed plan.

Annual Prizes.—Letters to Messrs. D. J. Hyde, T. J. Lockett, H. E. George, G. R. Goldsack and Misses H. B. Smith, M. Thomson and R. J. Hewitt, advising them of awards.

To Kodak (A'asia) Pty. Ltd. and Parke Davis & Co. Ltd., re continuity of awards preparatory to negotiations for inclusion in the Commemoration Programme of the University. Letter from Mr. A. V. Thomas, of Kodak (A'asia) Pty. Ltd.

Mr. Lipsham reported on discussions which he had with the Registrar of the University, and it was resolved that Mr. Lipsham be authorised to continue his negotiations with the Registrar on receipt of replies from the two companies concerned, as it was the desire of this Council that the names of prizewinners should be included in the programme.

Medals.—The Asst. Secretary reported on his action

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SOUTH AUSTRALIA—Continued

in ordering the gold and silver medals, and produced a draft of size and inscription. He stated that they would be ready for delivery on February 8. Resolved that the Asst. Secretary's action be confirmed.

Letter from Miss J. Thomas, forwarding cheque for "N. H. Tonkin Memorial Prize." The Asst. Secretary was directed to acknowledge the donation with a message of appreciation to Miss Thomas for her action.

Proposed Meeting of Lecturers in Pharmacy Organisation.—A report was received from Mr. K. S. Porter, setting out the scope of his series of lectures in 1956. After brief consideration, it was resolved that Mr. Porter be thanked for the report, and that details be referred to a meeting of the Council and the several lecturers concerned with subjects of this type.

Part-time Lecturer for Final Pharmacy.—Mr. Anderson's departure for America about June next under the terms of the Pfeiffer Scholarship necessitated the engagement of lecturers to undertake his various commitments. It was resolved:—

1. That Mr. Beresford Stock be engaged to undertake lectures in Botany and Pharmacognosy and for the organisation of practical sessions.
2. That Mr. L. E. Darwin be engaged on a part-time basis to deliver lectures in Pharmacy for fourth-year students.

Matriculation Requirements.—Mr. Lipsham reported on alterations to matriculation requirements to operate from the commencement of the 1957 academic year at the University. The alterations did not extend to Pharmacy, the conditions of entry into which remained as before.

Commonwealth Inquiry on Scope of Universities.—Newspaper reports on the appointment of a committee of inquiry by the Commonwealth Government into the future of the Australian Universities were considered. The reaction of University authorities in Adelaide as published was also noted, and the effect in the trend towards the increasing dependence of education upon Governmental subsidies was discussed.

Education Finance.—The Statement of Education Account for the year ended December 31, 1956, was submitted, and consideration was deferred to enable members to peruse the account.

Financial.—Accounts for payment totalling £478/7/10 were passed for payment. The Asst. Secretary produced a list of outstanding subscriptions, and he was directed to write a further letter reminding those concerned of their obligation.

Post-graduate Talks.—Due to the absence of Miss Walsh, consideration of the report of the sixth annual residential summer school at St. Anne's College was postponed until the March meeting.

Mr. Penhall said that a copy of the matter for publication in "The Australasian Journal of Pharmacy" on the 1956 series had been prepared, and would be forwarded to the Editor almost immediately. Consideration of the programme for 1957 series would be placed on the agenda for the March meeting.

A.P.F. Revision Committee.—The Asst. Secretary reported that the present committee, which operated for the 8th Edition, had been appointed in 1951. It was resolved that the committee for the 9th Edition should consist of the members of the Council of the Society, with power to co-opt assistance, the Chairman to be a member of the Council.

Half-yearly Meeting.—Copies of circulars sent to members and students were tabled and approved.

Adelaide Conference.—The Asst. Secretary reported

that he had still been unable to arrange a meeting of the sub-committee on this matter, but would continue negotiations.

New Members Elected.—Mr. G. R. Goldsack and Miss H. B. Smith.

Social Function.—Mr. Penhall reported progress, and further consideration was postponed until the March meeting.

Portrait of Mr. E. F. Lipsham.—Letter to Mrs. I. Erns, expressing appreciation of Council and enclosing cheque.

It was resolved (1) that the unveiling of the portrait should be undertaken at a special dinner to be held at the Largs Pier Hotel on March 14, 1957, if possible, and that Mr. A. W. McGibbony be asked to unveil the portrait in view of his long association with Mr. Lipsham, and (2) that special invitations be forwarded to Emeritus Professor A. Killen Macbeth, and Professors D. O. Jordan and G. M. Badger.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the South Australian Branch of the Guild met at 254 Sturt street, Adelaide, on February 11, at 7.45 p.m.

Present.—Mr. H. G. Collyer (President), Messrs. E. Lloyd Miller, A. C. Holloway, G. K. F. Scott, V. L. Mitchell, R. R. Patrick, A. A. Russell, A. G. Lean, Walter C. Cotterell and the Secretary.

Dispensing Fees.—Resolved that great appreciation be accorded to Messrs. Russell and Cotterell for the effort put forward by them in the matter of endeavouring to obtain decontrol of dispensing fees.

Various letters between the Guild and the Prices Branch were read to the meeting and approved, and it was suggested that the matter be left in abeyance for approximately 7 to 14 days.

Report to M.H.A.—Mr. Russell placed before the meeting a detailed report, which met with approval, and Mr. Russell was applauded accordingly.

Pricing Lists Service.—Resolved that as and from 1/7/57 the price of the Pricing Lists service be £4/4/- instead of £3/3/-. Resolved that the night of 25/2/57 be set aside for a Pricing Committee meeting.

P.A.T.A.—Resolved that Mr. Miller take the result of the discussion of the meeting to P.A.T.A. Council meeting on 12/2/57.

Report re Statistics.—Resolved that the statistics be returned to Public Relations Secretariat, with the comment that should a further survey be taken a different section of members be approached.

Federal Delegate's Report.—The Federal Delegate (Mr. Cotterell) gave a resume of the following matters:—Akta-Vite; Rule 60; and two other rules; Nicholas Pty. Ltd.; Interstate Pharmacists' Congress; Philadelphia College of Pharmacy (letter taken by Mr. Russell to pass on); Buildings for each State Branch; Aerosal; wreath late Mr. Lee; and demise of Mr. Fitch.

Pricing Officer's Report.—The Pricing Officer (Mr. Scott) gave a resume on the following matters:—Avo-dex Guild price in S.A. is 28/3, while Permindex shows 25/-; Gilseal Dyes; Gilseal Super Dye—considered better to improve the present pack.

Country Visits suggested for the near future are:—

Port Pirie	May 5
Barmera	June 9
Murray Bridge	September 8

The meeting closed.

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WESTERN AUSTRALIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in W.A., Mr. F. W. Avenell (phone BA 4082).

WEDDING

A wedding of particular interest to W.A. pharmacists took place at St. Luke's Church of England, Cottesloe, on January 26, when **John Miller**, of Bridgetown, and **Julie Pearson**, of Cottesloe, were married. John qualified in November, 1954, and Julie in November, 1956. They were both apprenticed at Allan's Pharmacy, Cottesloe.

The reception was held at the Civic Centre, Cottesloe. The guests included the following chemists—Misses Rosemary Fowler and Jocelyn Camm, Messrs. T. D. H. Allan and A. Cohen.

The couple are spending their honeymoon in the eastern States.

We were sorry to hear that **Mr. Lou Miller**, chemist, of Donnybrook, and father of the bridegroom, suffered a stroke a few days after the wedding and is now in Bunbury Hospital. Latest reports are that he is making satisfactory progress.

Mr. R. B. Robinson left by the "Southern Cross" on January 28 and **Jack Benn** and **John O'Hara** by the "Strathnaver" on February 15, all bound for England. They expect to be absent for about 12 months.

Mr. and Mrs. B. B. Caldwell left for England by the "Iberia" on February 4 and will continue their journey to New York from England. They also expect to be away for about 12 months.

Birth.—Congratulations to **Mrs. Stanley** (nee Beth Houghton) on the birth of a daughter, and to **Mrs. Mery** (nee Shirley Hamon) on the birth of a son, Peter Steven, also to **Peter and Pat Masarei**, on the birth of a son, Ian Peter.

Miss Brenda Cleave returned from London by the "Strathaird" on February 13. Since her return she has been relieving **Mr. N. A. Steere** at Piccadilly Pharmacy.

Narcotic Drugs Stolen.—In the Perth Police Court on February 12, **Sister Edna May McDougall** pleaded guilty to a charge of stealing Pethedine Ampoules from a private hospital at which she was employed. In 1952 a conviction was recorded against the defendant for stealing Morphine Tabs. She was bound over on a bond of £100 to come up for sentence when called upon.

OBITUARY

HARRY DUNCAN FITCH

With the passing of **Harry Duncan Fitch** on February 5, 1957, Australian Pharmacy lost one of its most loved leaders. Of no man could it be said more truly that he fulfilled every office which he held with dignity, grace and efficiency. To meet him was a joy and to have been associated with him in any undertaking an enriching experience, not to be forgotten. Towards the end of his life, with the knowledge that but a short time remained, he demonstrated those deep qualities of character which marked him as a man among men.

Pharmacy and the community have lost a true friend

and respected colleague, but have before them the memory and example of one whose life and work provided inspiration.

Mr. Fitch was Past-President of the Pharmaceutical Council of Western Australia, and at the time of his death was Deputy President of the Pharmaceutical Association of Australia. To these and all his other tasks he gave of his best, and it is a matter of profound regret that he was not spared to take office as President of the Association.

The esteem in which he was held in Western Australia was indicated by the number of mourners at the funeral. At least 500 people from many walks of life attended and shared with relatives and close friends sorrow at the passing of a friend.

The day after his death a notice was published in Western Australia asking friends and relatives wishing to express sympathy not to send flowers, and to donate the money to the establishment of a cancer fund which **Mr. Fitch** suggested be established at the new Western Australian Medical School at the University of Western Australia. One of his last acts was to send a personal donation to open the fund. During the address given by the Rev. Alexander Mayliver at the funeral he referred

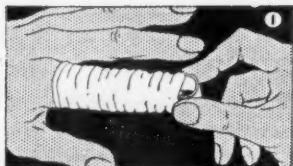


The late **Mr. H. D. Fitch**

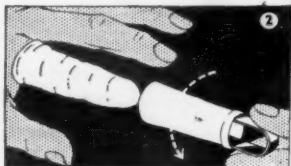
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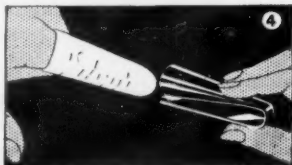
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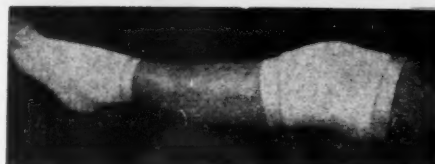
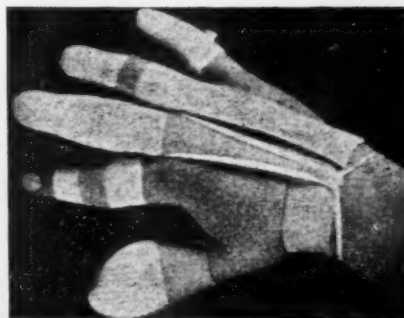
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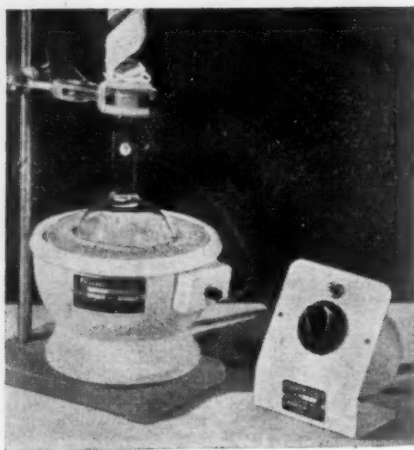
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WESTERN AUSTRALIA—Continued

to this and said that although Harry Fitch was not one seeking publicity, it would be most fitting that such a fund should bear his name.

We have received and publish below a number of tributes received from co-workers of the Late Harry Fitch:

From Mr. R. I. Cohen, President, Pharmaceutical Council of Western Australia—

On Tuesday, February 5, the members of the Pharmaceutical Council of Western Australia held their regular monthly meeting. A vacant chair indicated that one of their number was not present, and Councillors stood silent as a mark of respect to the memory of Harry Fitch, who had passed away a few hours earlier.

In all walks of life it is natural and inevitable that the old must eventually lay down their burden and pass on. We mourn but accept their loss. But to us, in our ignorance of the Divine plan, it seems a tragic blow that a man in the best years of his life, with so much accomplished and the capacity to do so much more in the future, should be taken from us.

Such a man was Harry Duncan Fitch. At the earliest opportunity in his professional career, he entered enthusiastically into the official side of Pharmacy by his election to the State Branch Committee of the Guild only a year after joining that organisation. He subsequently held offices as Vice-President and Treasurer, temporarily relinquishing these posts to serve his country overseas. On his return he was elected a member of the Pharmaceutical Council of Western Australia, and served as President for a period of four years from 1950. The P.A.T.A. also claimed his interest—he was Vice-President of this Association, and was also Chairman of the local Board of P.D.L., of which he had been a member for some years.

His life was devoted to service—not merely because he considered it his duty to serve, but because he enjoyed serving. He served his profession; his country; his church and his fellow men. He gained a great reward in the performance of his varied interests—the spontaneous and lasting friendship of all with whom he came in contact. Those meeting him for the first time could not fail to be attracted by him and feel happy in his company.

At the Council table, or in Committee, his opinion or advice was always highly regarded. It is significant that even in his early attendance at conferences in the eastern States, he was very soon marked by those in authority as a potential leader, and at the Melbourne conference in May of last year, it thrilled his Western Australian colleagues to hear him elected Deputy President and President-Elect of the Pharmaceutical Association of Australia by the unanimous vote of representatives of all the States, and to listen to the applause that marked his humble words of acceptance.

It is sad to realise that Harry was denied the opportunity of being installed in the Presidential Chair of this association—the highest office to which a member of his profession could aspire. It is sad for us all to contemplate the loss of such a leader in Pharmacy—such a friend—such a man.

We indeed mourn his passing.

From H. A. Braithwaite, President, Pharmaceutical Association of Australia—

Quite some time back Mr. Harry Fitch knew he would not live for very many years.

Thinking of those who may be helped to live a normal span of life, after developing such a trouble as his, he suggested to the Medical School, University of Perth, that a Mellanoma and Cancer Research Fund be established. He sent a donation, accompanied by a simple message.

If any of the friends of Harry Fitch scattered throughout Australian pharmacy, or in all our organisations, would like to join me in a memorial contribution in lieu of flowers they might have sent with their messages of sympathy, they might send a cheque to the Hon. General Secretary of the Pharmaceutical Association, 360 Swanston Street, Melbourne, for transmission to the Perth Medical School.

Our memories of Harry Fitch are that of a gracious gentleman of quiet and positive strength of character, and of his high standards of personal and business life.

I believe that all his friends with those memories in their minds will, in their turn, use Harry's example for living and working in friendliness with others.

From Mr. K. S. Porter, Hon. Treasurer, Pharmaceutical Association of Australia—

With the passing of Harry Fitch, Australian Pharmacy has lost a willing, loyal and unselfish worker, who contributed much towards the maintenance of the dignity and ethics of his profession.

He possessed that rare quality and charm that always made one feel the better for having been with him and proud to have been associated with him in official pharmacy; above all, by his sincerity of purpose and unselfishness, he brought out the best in all with whom he served.

His gentlemanly bearing, deep thinking, and wise counsel commanded the utmost respect wherever he moved, and the Association has suffered a great loss in that he did not live to become President, which position I know he was looking forward to holding and would have filled with credit.

I, with many others, will miss his friendship and fellowship at future meetings and conferences, but the memory he leaves behind must serve as an inspiration to those who follow.

From Mr. W. R. Cutler, a Past-President of the Pharmaceutical Association and of the Federal Council of the Pharmaceutical Societies of Australia.

At Brisbane in 1951, the Conference of the Pharmaceutical Association of Australia was graced by many familiar faces, and also by some new ones. Among the latter was one who, by his charm, courtesy and ability of sound debate, not only enhanced the pharmaceutical status of his own State, but also established a very solid and friendly impact in his own right. Thus did Harry Fitch make his debut into interstate pharmaceutical conclave.

Now, after an all too brief period of valuable active work, he has been taken from us and elevated to a Higher Office. We mourn his loss as our future Association President, as a wise councillor in our deliberations, but above all, as our true and trusted friend.

Pharmacy throughout our great Commonwealth, and particularly in New South Wales, offers heartfelt sympathy to Harry's family, especially to Mrs. Fitch and Cecily.

May it now be said that we and they will always cherish the evergreen memory of one of the "Finest"; and what a privilege it has been to have known him and taken him by the hand.

WESTERN AUSTRALIA—Continued

THE GUILD

S.B.C. Meeting

The State Branch Committee of the Western Australian Branch of the Guild met at 190 Adelaide Terrace, Perth, on February 12, at 7.30 p.m.

Present.—Messrs. G. D. Allan (Chair), J. V. Hands, S. J. Wilson, R. I. Cohen, M. H. Arnold, R. D. Edinger, J. G. Skeahan, R. J. Healy, D. G. White, G. H. Dallimore, R. W. Dalby, W. G. Lewis, and members as per list.

Obituary.—The President declared the meeting open, and the meeting stood in silence in memory of our esteemed late member Mr. Harry Fitch.

Country Chemists' Convention.—Arrangements had been finalised and notices sent to all country members.

Opening of "Guild House."—All preliminary arrangements had been completed and invitations sent to all members.

New Members Elected.—Messrs. Arthur Land, Bunbury; Graeme Bruce Sherry, Bunbury; Keith Maynard Kidd, Perth; W. John Nott (branch at 160 St. George's Terrace, Perth), and Mrs. A. E. Godfrey, Willagee Park. It was recommended that a letter be sent to the Secretary of the Bunbury Zone, officially informing him of Mr. Sherry's election to membership, and that Mr. J. V. Hands call on the chemists at Bunbury.

Parking Area.—A letter had been sent to the Traffic Department, requesting permission for a deputation to call on the department and place our case before them. No reply had yet been received.

Perth Chamber of Commerce.—Resolved that the Guild apply for membership of the Perth Chamber of

Commerce, and that the President be appointed the Guild's Delegate to any meetings.

Window Dressing.—Recommended that a letter be sent to Mr. H. Bester, advising him that the matter was under consideration.

Financial.—The Treasurer (Mr. R. W. Dalby) then presented his report, and in doing so pointed out that the approximate cost of furnishing the new boardroom would be in the vicinity of £1000. It was resolved that the accounts as presented be passed for payment, and that the select committee elected to purchase the furnishings be empowered to make the necessary purchases.

Federal Delegate's Report.—Mr. Dallimore reported that he had just attended a Federal Executive meeting, and that so far no success had been reached with Heinz. Also that we were all aware that Federal Office had purchased a building for the use of the W.A. Branch.

Trade and Commerce Report.

Guild-Colgate Window Dressing Competition.—W.A. had not been represented in the list of Commonwealth prize winners, but the standard of the W.A. displays had been highly commended.

Labels for "Gilseal" Pack.—There had been some delay in this project because the blocks did not fit the manufacturers' machine, but adjustments were being made.

"Codis" and "Disprin."—From reports received it appears that there is little chance of having Codis and Disprin tablets unbranded for dispensing purposes.

Johnson & Johnson Policy.—Johnson & Johnson have now changed their selling policy so that their representative can take turnover orders on a nominated warehouse.

Colgate Offer on Cashmere Bouquet Soap.—Some misunderstandings on the Colgate rebate offer concerning Cashmere Bouquet soap have been cleaned up by personal contact with Mr. Beeton, Colgates' local manager, who has been most co-operative in the matter.

"Lantigen."—It is considered that Federal Office should approach Edinburgh Laboratories to have a higher uniform standard margin throughout Australia.

"Gilseal" Packed Oils.—In view of the past difficulty in obtaining olive oil and the change-over to the new pack, several months of selling were lost. The results over the last four months prove conclusively that the new pack is a winner, and commands the support of all chemists.

"Dettol" and "Steradent" Drive.—This drive has been postponed from February to April. A film night is being arranged, and the date will be published later.

Resolved that the report of the Trade and Commerce be received and that the recommendations be adopted.

Pricing Officer's Report.

Repatriation Dispensing.—Reports from the Repatriation Department indicate that there has been a speeding up of the payment of accounts, with hope for future improvement.

Retail Price List.—The Retail Price List is approximately three-quarters finished, and is proceeding according to schedule.

Commonly Used Over-Counter Lines.—The price list of these products has been completed and is ready for publication.

Sterile Eye Solution.—A complete list showing which Eye Preparations should be sterile and carry the sterile dispensing fee is in the course of completion, and will be published shortly.

Melonoma Cancer Fund.—Resolved that an amount of £5/5/- be forwarded to the Melonoma Cancer Fund, following a suggestion by the late Mr. H. D. Fitch.

"Sunday Times" Supplement.—Recommended that the Secretary contact the "Sunday Times" with the object of getting a supplement printed covering the opening of "Guild House."

The meeting closed at 11.45 p.m.

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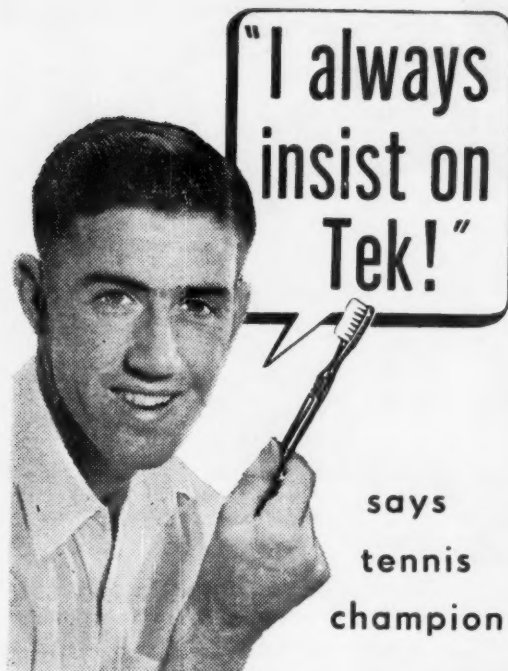
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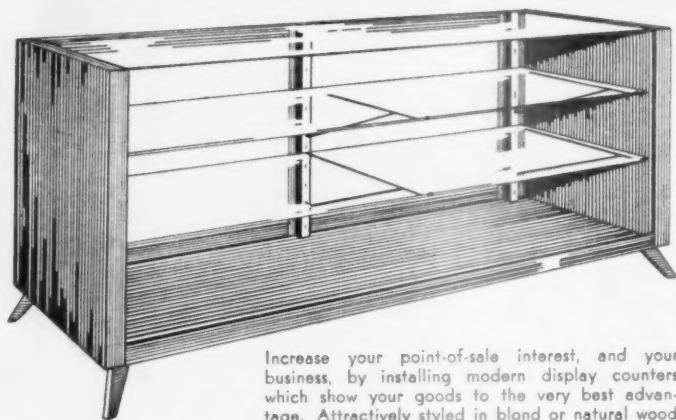
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TASMANIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in Tasmania, Miss M. L. Williams, 276 Argyle St., North Hobart ('phone B 1010).

Miss Jennifer Cramp has recently returned after a fortnight's holiday in Melbourne.

Mr. Lindsay McLeod took his wife and young son to Coles Bay for his vacation.

Congratulations to Mr. David Allen and every good wish for the success of his new venture in Penguin.

Congratulations and very best wishes to Miss Margaret Tribolet on her engagement to Mr. Alfred Jones. Marg is very busy preparing for her Easter wedding.

Congratulations to Miss Yvonne Atkins and Mr. Lasky, who were successful in gaining the Parke, Davis Prize for 1956, giving them a trip to Sydney. Congratulations also to Miss Shaw on gaining the J. H. Gould Memorial Prize.

We are pleased to have Mr. Don Parsons, of Devonport, in Hobart, and to see Mr. Don Stewart back once more in Hobart.

We welcome Miss M. Shaw and Mr. B. Churchill, who have come south to complete their final year's apprenticeship in Hobart pharmacies and at "the College."

Miss Dorothy Croft has left her pharmacy in the hands of Mr. Roy Gunton and gone for a three weeks' holiday to Victoria, where she intends to wander over the State as far as Mt. Gambier.

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of Tasmania met at Hobart on January 23, at 8 p.m.

Present.—Mr. F. H. Cartledge (Chairman), Miss M. L. Williams, Messrs. E. H. Shield, A. G. Gould, A. K. Smith and the Registrar.

Pharmaceutical Register.—Mr. G. A. V. Laver (ex-N.S.W.), Miss Rosemary I. Brand (ex-Great Britain), and Miss Edith W. Dobson (ex-N.S.W.) were registered.

Apprentices.—Indentures of Athol David Townley with Athol Gordon Townley were registered.

John Cornelius Wilson with Arthur Kriss Smith: Registration of indentures was approved subject to the presentation of Schools Board Certificate.

Miss Marion R. Shaw: Approval was granted for registration of transfer of indentures from Mr. C. O. Holmes to Mr. O. Colman.

Barry K. Churchill: Approval was granted for registration of transfer of indentures from Mr. C. O. Holmes to Mr. D. R. Crisp.

J. L. Gould Memorial Prize.—The necessary samples and notebook as entrance for this prize had been received from Miss Marion Shaw and submitted to Dr. Burgin and Mr. Shirrefs, who reported that the work and notebook were both of a sufficiently high standard to justify the awarding of this prize to Miss Shaw.

The Board therefore awarded Miss Shaw the prize.

Finance.—Accounts totalling £88 were passed for payment.

Diplomas.—The meeting decided that the wording of the Diploma issued by the Board should be changed, the new wording to be: "This is to Certify that of having passed the Final Examinations of this Board, is a duly qualified Pharmaceutical Chemist entitled to be registered under the provisions of Section 21 of the Pharmacy Act 1908."

Vaccine from New Zealand.—The Chief Veterinary Officer advised that a chemist in Hobart had sought the supply of a vaccine and anti-serum for use against a particular disease in cattle. He drew attention to the control of such importations under the State legislation, and requested that chemists in Tasmania be reminded of this fact.

The meeting decided that a circular to this effect be sent to all pharmacists.

Pharmacy Board Membership.—On the completion of his third term of office, Mr. H. H. Pearce tendered his resignation as a member of the Board.

In accepting this resignation with regret, the President referred to the valuable work which Mr. Pearce had done for Pharmacy. He said that all pharmacists owed a debt of gratitude to Mr. Pearce for the time he had given in their cause.

A nomination was received from Mr. T. A. Stephens, and as this was the only nomination received the President declared Mr. Stephens and the retiring member, Mr. I. B. McLeod, elected for the ensuing three years.

The meeting closed at 10.15 p.m.

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of Tasmania met at 85 Elizabeth street, Hobart, on February 11, at 6.15 p.m.

Present.—Mr. E. H. Shield (Chairman), Miss M. E. Purdon, Messrs. B. J. Shirrefs, C. A. Robertson, L. J. McLeod, A. P. Brammall and the Secretary.

New Member Elected.—Miss Enid Walbray Dobson.

Nominations.—The Secretary reported that Mr. W. G. Webb had indicated his willingness to fill the vacancy caused by the resignation of Mr. K. H. Jenkins.

Annual Report.—A draft of the Annual Report was considered and approved for circulation.

Annual General Meeting.—Mr. Robertson reported that Mr. J. Levis would be providing films and arranging projection for this evening. Other details were discussed and finalised.

Obituary.—A telegram was received from the Pharmaceutical Council of Western Australia notifying the death of Mr. Harry Fitch. Members expressed deep regret at Mr. Fitch's passing; this would be a great loss to Pharmacy.

Social Function.—Possible venues for the annual social function to be held towards the end of March were discussed, and left for the Secretary and President to make further inquiries.

The meeting closed at 7 p.m.

VICTORIA

PERSONAL and GENERAL

State News

Members in Victoria desiring publication of personal items of interest are invited to write or telephone details to the Editor (FJ 5161).

Mr. W. J. Davis has taken his son Mr. John Darral Davis into partnership at High street, Thornbury.

Mr. W. C. Branchett has accepted an appointment as manager, Morris Hedstrom, Fiji.

Mr. H. W. Hanton and Miss Shirley Hanton sailed in February for Great Britain.

Miss G. Hattam, Mr. K. R. Hall and Mr. G. Naismith are sailing by "Otranto" for Great Britain in April.

Mr. B. J. Gambetta has opened a pharmacy at 193 San Mateo avenue, Mildura.

Mr. L. G. McKenzie has resigned as manager for the estate of the late R. S. Corson, Koroit, where Mr. A. Shaw is in charge at present.

Mrs. J. V. Cohen, trading as "The Modern Pharmacy," has moved her pharmacy from 266 Wattle-tree Road, to 271 Wattle-tree Road, Malvern, S.E.4.

Smash and Grab.—Photographic equipment valued at £109 was stolen following a smash and grab raid on the pharmacy of Mr. William J. Shaw at Lloyd street, Moe, early on the morning of February 9.

Mr. R. D. Moore and Mr. B. A. Moore, sons of Mr. E. A. O. Moore, of Bentleigh and Hampton, will leave by the "Southern Cross" on April 12 on an overseas tour to England, the Continent and America. Mr. R. D. Moore qualified in December, 1955, and Mr. B. A. Moore qualified at the end of last year.

Mr. Arthur Watterson, who qualified at the Victorian College of Pharmacy Final Examination in 1952, will shortly leave for New Guinea to serve with the Baptist Mission. His address will be C/o Baptist Mission, Baiyer Valley, Goroke, Territory of New Guinea.

MANAGERS AND RELIEVERS—FEBRUARY LIST

Manager or Reliever	Pharmacy
Broome, Miss J. . . .	Mr. G. A. Allan, Wonthaggi
	Mr. H. C. Bray, Cowes
Callahan, Mrs. . . .	Mr. I. L. Field, Brighton
Cocks, Mr. D. J. . . .	Mr. V. M. Meagher, Brunswick
	Mr. J. F. Isaac, Sandringham
Digby, Mr. J. W. . . .	Mrs. Andrews, Korumburra
	Mr. J. O. Adams, Monbulk
Duffus, Mr. J. D. . . .	Mr. E. J. Wilson, Wangaratta
Everett, Mr. C. D. . . .	Mr. N. E. Vince, North Carlton
	Mr. N. Thane, Glen Iris
	Mr. D. Nicholson, Albury, N.S.W.
	Mr. J. Maher, Beechworth
Goodridge, Mr. J. . . .	Mr. N. L. Shrimpton, Preston E.
Gregory, Miss J. A. . .	Hornsey's Pharmacy, Moonee Ponds
Gurry, Mr. L. F. . . .	Mr. G. E. Gray, Swan Hill
Halperin, Mr. B. . . .	Mr. A. J. Landers, St. Kilda
Hawksley, Mr. R. T. . .	Mr. H. J. Ramsay, N. Ca Iton
Hood, Mr. G.	Mr. J. W. B. Pedley, Yarraville
Jarvis, Miss R.	Mr. K. T. Williams, Ringwood
Leaman, Mr. J. S. . . .	Mr. N. E. J. Zerbe, Hampton
Lilburne, Mr. H. M. . .	Mr. J. M. Sloan, Mortlake
Matthews, Mr. D. C. . .	Cumming's Pharmacy, Footscray
	Urquhart's Pharmacy, Hawthorn
Moore, Mr. D. R. . . .	Mr. A. E. Moore, Bentleigh
Milne, Mr. I. G. . . .	Mr. G. S. Milne, Melbourne
	Mr. J. W. Pollock, Alexandra

Manager or Reliever

McKay, Miss P. . . .

Nicholls, Mr. B. K. . .

Perrett, Mr. J.

Phillips, Mrs.

Pratt, Mr. A. H. . . .

Railton, Mr. D. B. . .

Rundle, Mr. A. B. . .

Thompson, Miss I. . .

Tilley, Mr. M. R. . . .

Ulrich, Mr. P. E. R. . .

Westlake, Mr. A. G. . .

Wood, Mrs. H. H. . . .

Pharmacy

Mr. E. G. Norris, Essendon

Mr. J. J. A. Lee, Stanhope

Bull & Owen, Geelong

Jones & Co., Essendon

Mr. G. I. Heilbrown, Sunshine

Mr. D. L. Ardagh, Ballarat

Mr. D. G. Mitchell, Chelsea

Ludbrook's Pharmacy, Horsham

Mr. S. Gandolfo, Black Rock

Mr. E. J. Wilson, Wangaratta

Mr. V. Israel, Mildura

Mr. A. L. Skewes, Kew

Mr. S. J. Buscombe, Auburn

Mr. S. J. Carroll, Gardenvale

Mr. E. T. Dean, East Malvern

Mr. A. H. Thom, Warragul

Mr. H. P. Cooper, Elsternwick

Mr. A. H. Mansell, Glenferrie

BUSINESS CHANGES

The following pharmacies have changed hands:—

Mr. P. M. McKay purchased from Mr. J. A. Johns, Johnson street, Maffra.

Mr. I. L. Field purchased from estate A. V. Huntsman, 121 Were street, Brighton.

Miss M. P. Hayes purchased from Mr. A. R. Osbourne, 88A Strathmerton road, Reservoir.

Mr. C. W. Jackman purchased from Mr. D. N. Ardagh, 104 Sturt street, Ballarat.

Mr. J. E. Bullock purchased from Mr. D. R. Coates, Beulah.

Mr. D. H. Mellor purchased from Mr. G. W. Flude, 897 High street, Armadale.

Mr. J. I. Richards purchased from estate late M. R. Battarbee, 95 Puckle street, Moonee Ponds.

WEDDINGS

Wedding.—The marriage of Miss Jean Paterson, Ph.C., M.P.S., and Mr. Ian Inglis, Ph.C., M.P.S., took place at Warrnambool on February 2. The young couple attended lectures at the College together and qualified in 1955. They left Melbourne on an overseas trip on February 10, and plan to be absent for 12 months or more. The bride's father is well-known Warrnambool chemist, Mr. James Paterson.

The Rev. Alec Fraser officiated at Littlejohn Memorial Chapel, Scotch College, on February 9, for the marriage of Barbara, younger daughter of Mr. and Mrs. A. G. Brunet, of Balwyn, with John William, only son of Mr. Victor Dartnell, chemist, of Surrey Hills, and Mrs. Dartnell. The bridegroom, who was apprenticed to his father, has only the Final Examination to pass in order to complete his qualification.

A mortar and pestle were distinctive decorations on the wedding cake at the reception which followed the marriage at Horsham on January 26 of Miss Rosemary Ruth Rogers and Mr. Ian Ralph Ampt. Both the bride and bridegroom are chemists.

Rev. E. C. Hempel officiated at St. Andrew's Church, Horsham.

The bride is the only daughter of Mr. and Mrs. A. M. Rogers, Horsham, and the bridegroom the younger son of Mr. and Mrs. J. E. Ampt, Quantong.

The bride's cousin, Miss Amy Heywood, of Warrenbayne, was bridesmaid and Mr. John Hosch was best man.



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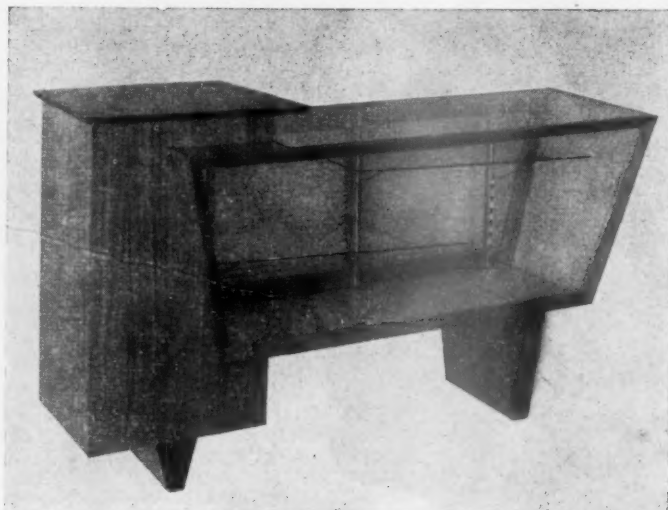


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VICTORIA—Continued

PHARMACY DAMAGED IN FIRE AT WINDSOR

Fire did thousands of pounds' worth of damage to four shops in Chapel street, Windsor, on January 28.

The shops, which adjoined, included the pharmacy of Mr. B. Markov.

The fire is believed to have started in a storeroom at the back of a grocery shop, which was burnt out.

ACCIDENTS TO CUSTOMERS

Separate Insurance Policy Needed

From time to time over the past seven years the Directors of Pharmaceutical Defence Ltd. have informed members that the regular Chemists' Indemnity insurance policy does not include cover against accidents that might happen to a customer whilst on the premises, as, for example, slipping on the floor or stumbling over an obstruction within or at the entrance to the pharmacy.

For this risk a separate General Public Risk insurance policy (referred to as "Premises Risk") is required. Premium rates are very moderate, and are on a scale according to salaries and wages paid. Thus a chemist paying £1500 in wages can obtain a £1000 premises policy for a premium of £3. A lower wages bill enables this cover to be obtained for less; conversely, the premium rate rises as the wages bill increases.

The need for this reminder became evident during the month, because a P.D.L. member of long standing found that he had not the premises risk cover at a time when a customer had had a fall in his pharmacy. He had not noticed the references to this insurance in the communications from time to time from the P.D.L. office.

DISCUSSION GROUP

Colour Photography

The first meeting of the Discussion Group for 1957 was held at the College of Pharmacy on February 13, when the subject was "Colour Photography." The guest speaker, Mr. J. O. Colahan, of the Westminster Chemical Company, was introduced by the President of the Group, Mr. Geoff Treleven.

Mr. Colahan's address is published elsewhere in this journal.

The meeting was brought to a successful conclusion by Mr. Treleven thanking the speaker for his informative talk and interesting demonstration of colour slides, and also Mr. Le Page for acting as projectionist. Finally, Mr. G. Leete in supporting the words of the President, expressed sincere appreciation to Mr. Colahan on behalf of the large audience for his most interesting lecture, and also expressed the hope that Mr. Colahan would be able to speak again to the Group at a later date.

VICTORIAN CHEMISTS SUB-BRANCH R.S.S. AND A.I.L.A.

The annual meeting of the Victorian Chemists' Sub-Branch of the R.S.S. and A.I.L.A. was held at the College of Pharmacy, Melbourne, on February 21, at 8 p.m.

Mr. L. B. Allen was reappointed President for the ensuing year.

Messrs. R. T. Holdsworth and F. C. Wittman were re-elected Vice-Presidents and Mr. R. H. Borowski was elected Hon. Treasurer. Mr. A. N. Dean was re-elected Hon. Secretary.

The new Committee will be: Lt.-Col. T. H. Gay, Messrs. H. C. Henshall, A. E. Jaggs, R. V. Khyatt, C. N. McLeod, D. Mulcahy and K. N. Roberts.

In presenting the annual report, Mr. Allen thanked the members who had demonstrated their interest over

the past year. There had been two very happy functions, but the Sub-Branch had not been very active.

Mr. Allen expressed the opinion that until such time as it had the use of its own clubroom in the new College of Pharmacy, as promised by the Council, there might not be a great deal of activity.

The future of the Sub-Branch was, however, in the hands of the members. Those who did attend the functions enjoyed the spirit of comradeship which prevailed so long as the Sub-Branch was in existence. It would be ready and willing to spring into action if and when the necessity arose. During the past year this was demonstrated when the members came to the aid of the widow and the family when one of their members had died.

Mr. Allen paid tribute to the work of the Secretary, Mr. Norman Dean, without whom he said the Sub-Branch would not have functioned at all.

As a tribute to the passing away of two members during the year, Mr. H. W. Dawson and Mr. S. G. Hale, members stood in silence at the request of the President.

A motion that the membership qualification of the Sub-Branch be extended failed to secure the necessary two-thirds majority of votes as required for an alteration of the constitution, and was lost.

KODAK SCHOLAR FAREWELLED

Mr. A. I. K. Lloyd, winner of the Kodak Travelling Scholarship No. 3, was farewelled at a small dinner party given by the Executive of the Pharmaceutical Association at Menzies Hotel on February 15.

Mr. H. A. Braithwaite, the President of the Association, presided, and special guests were Mr. Edgar Rouse, Chairman of Directors of Kodak (A'asia) Pty. Ltd., and Mr. A. K. Lloyd, father of the winner of the scholarship.

The function was of an informal nature, and the only speeches were the toast to Alistair Lloyd, which was proposed by the chairman and supported by Mr. Rouse, and the response.

Mr. Braithwaite, on behalf of the gathering, wished Mr. Lloyd a happy and profitable time overseas. He said the Association had every confidence that he would be a worthy holder of the scholarship. Mr. Rouse added his congratulations. He said he, too, felt that the selectors had chosen a very suitable man. The project submitted by Mr. Lloyd was very interesting, and his investigations on the part that pharmaceutical science and pharmaceutical personnel could play in civil defence could be of great value to the community.

During his remarks Mr. Rouse expressed the hope that other companies associated with pharmacy and the drug trade should follow the lead in providing travelling scholarships. He threw out also the suggestion that consideration be given to using some such scholarship fund for bringing to Australia outstanding authorities or lecturers and attaching them to teaching institutions in this country for a limited term, as was done in medicine and other professions.

Mr. Lloyd briefly responded. He thanked Kodak for providing the scholarship and the Pharmaceutical Association for the help given to him. He said he wished also to express his gratitude to Mr. N. C. Manning for much friendly help and guidance during his period of apprenticeship.

Mr. Lloyd, Senior, expressed his thanks for the invitation extended to him to be present on an occasion which brought much pleasure to him. He wished also to thank Mr. Braithwaite for his kindly thought in sending flowers and a kind message to Mrs. Lloyd, who was not present. Both he and his wife had been greatly touched by this gesture.

During the evening Mr. N. C. Cossar announced that Henry Francis & Co. would donate to the College a portrait in oils of Dr. Byron L. Stanton, who had been

VICTORIA—Continued

Lecturer in Materia Medica in the College of Pharmacy for very many years. This announcement was greeted with applause and accepted on behalf of the Council by Mr. Scott, the President.

Mr. Rouse said his company would like to donate also an honour board for the new College of Pharmacy to record the names of winners of the Kodak Scholarships.

THE VICTORIAN COLLEGE OF PHARMACY OPENING OF THE 1957 SESSION

The official opening of the 1957 session of the Victorian College of Pharmacy took place on Wednesday, February 20. The main Lecture Theatre was packed to capacity for this ceremony. Representatives of the various pharmaceutical organisations, prize winners and their parents, donors of prizes and representatives of the drug trade were among the guests.

Mr. Eric Scott, President of the Pharmaceutical Society, presided and introduced the Premier, the Hon. H. E. Bolte, who delivered the address and later presented prizes.

Introduction by the President

Mr. Premier,

We are delighted to have you present with us this morning on this important occasion.

We are appreciative that you have found time to visit us, because we know that you have been exceedingly busy.

We are particularly glad that you will have an opportunity to see the work that is being done in this College and the cramped conditions in which we operate.

Recently you informed me that your Government would honour the pledge given by a previous Government, to advance the sum of £300,000 for the building of a new College.

I can assure you that this an exceedingly urgent requirement.

At the present time teachers and staff are doing a splendid job, but working against odds.

We are not turning out nearly enough pharmaceutical chemists to meet the requirements of this State, and on the other hand are refusing admission every year to upwards of 150 people who are qualified to enter the course and wish to do so.

You personally, I know, take great interest in all problems associated with the development of Victoria and we know also that you are keen to help those who are prepared to help themselves.

It may interest you to know that this Society is now entering upon its hundredth year.

One of the principal aims of the founders was to have set up a proper course of education and training for pharmaceutical chemists. They approached the University of Melbourne at the time with a request that they provide that instruction, but the request was turned down flat. They then set about establishing their own College and some 20 years after the formation of the Society and after a great deal of negotiation, this building was obtained. It was the old County Court and the cost to the Society was £400. The land on which it stands is still Crown land.

Since 1884 the College has been practically self-supporting. When additions to the buildings have been required the members of the profession have put their hands in their pockets and helped to pay the cost.

A very small maintenance grant was given by the Government at the same time. However, the Council, being composed of conscientious men, made the mistake of showing a profit for one or two years and disclosing this in its financial statements. This was spotted by the State Treasurer, Sir William McPherson, and the munificent annual grant of £250 was stopped.

We appreciate your presence here today, we trust that you will enjoy the experience and that before long we shall have the pleasure of seeing you in a new building which will measure up to modern standards and requirements.

The Premier's Address

Mr. President, ladies and gentlemen,

I thank you, Sir, for your most informative and interesting introduction and for your reminder of our meeting recently. How could I forget our meeting the other day when I am not allowed to forget it and, I would suggest, I will never be permitted to get into that happy position.

What one speaks about at a function of this kind I would not know, least of all on chemistry. In my particular position I am called on to open many things. A reservoir here, a hospital there, a new pharmaceutical year and so on and so on, but no one could be an authority on all these varied interests. However, I have taken some small interest in the problems of chemists and would-be chemists of the future, and can recall some controversial legislation over the past few years.

I believe that you young people have a tremendous



The Premier with some of the successful students after the ceremony.

"Age" photograph.

VICTORIA—Continued

role to play in the future. I am delighted to be able to say quite frankly, that the same high ethical standards are maintained in the sphere of the chemist as are found in the medical world, and whilst this position is upheld you may expect to receive the respect of the average citizen. You have a great job ahead of you. With the present advances of medical science we are getting new drugs and new remedies in all branches of medicine. Therefore you young people will have a tougher job than your predecessors.

I have looked through your syllabus, and how you get through it is beyond me. That you evidently do is borne out by the fact that you get your diplomas. There is just one thing I would like to know—How in the world do you read the medicos' hieroglyphics?

I am most interested to know that this is your Centenary Year. This must be most gratifying to the Council of your Society, and I trust that at long last you will be able to build something on that rubble at Parkville.

It is true that we have undertaken to honour the pledge of a previous Government and I do wish you well in this venture. It is also true that people who help themselves deserve to be assisted, and I believe there is no profession or group of people who have done more for themselves than you people. I hope it will continue, because there is a tendency today for people to remark—What is the Government doing about it?

I would remind you that the Government has no money at all. What it has got is your money. So that if you ask that the Government come to the party, or why doesn't Bolte, or someone else do this or that, remember it is, after all, your own money that is being handed out. Therefore it is only right that there should be proper control by the Treasury and very careful supervision—it is in the public interest.

I have taken some undertakings on behalf of your profession, so that perhaps I can say this: In your profession you are in touch with the public as much, or even more so, than the medical man. Men and women will call in at the chemist's shop at all times. They do not want a prescription, they want a particular problem analysed by the chemist. I have some friends who enjoy a night out in the knowledge that they can call in at the chemist in the morning. You will find how many of these people you can handle and how many you can send on. You have a tremendous part to play. You have to advise people, probably more so than their medical advisers. In fact some people have no medical advisers. The record has been high. You have been able to save peoples' lives, or to arrest an illness before it starts. I only hope that 1957 will show further advances.

You here today are privileged people, simply because you have been admitted, because, I take it, of that lack of accommodation. Those who are admitted have a great responsibility. Whenever there is a shortage there is that added incentive to make sure that you justify your own existence, and the great faith that has been



Raymond Barry (4th Year) and Russell Callister (3rd year) display their medals.
"Age" photograph.

placed in you. It is up to you to make sure that you justify that confidence in you and in your chosen profession.

With these few very inadequate remarks I formally declare the year 1957 open.

(Sustained applause.)

Prizes were then presented to successful students of 1956 by the Premier. [The Prize List was published in the January issue of the Journal.—Ed.]

Presentation.—To conclude the ceremony the Dean, on behalf of the College Council, presented to Mr. Bolte a book. In so doing he said:

On behalf of the Council of the College the Dean asked the Premier to accept a copy of *The Art of John S. Loxton* as a memento of the occasion.

He said how much they all appreciated having the Premier with them to officially launch the year's work—and how glad they were that he should see on the spot the many disabilities under which the College was working.

DEATH OF MR. F. N. LEE, GUILD PRESIDENT Tributes from Some of His Colleagues Published in "Gilseal News"

Mr. F. N. Lee, President of the Victorian Branch of the Guild, died suddenly at his home, St. George's road, Thornbury, during the early hours of the morning of Saturday, January 26. He had not complained of any illness and went about his normal activities right to the end. As late as the afternoon of the Friday he was in the Guild office as was his custom. His passing came as a great shock to all who knew him.

The late Mr. Lee was a comparatively young man, and was possessed of unbounded energy.

As President of the Victorian Branch he was very active in Guild affairs, and contributed in no small measure towards the drive and initiative of the Victorian State Branch Committee, of which he had been a member for twelve years.



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HOBART: H. T. GROUNDS, 152a Collins Street. Phone: B 3511 - B 2370.

VICTORIA—Continued

During Mr. Lee's presidency the Victorian State Branch Committee put into operation several new services for members. These included the Weekly Price Alteration Service, the Guild Insurance Scheme, and the N.H.S. and P.M.S. prescription pricing service. Also, under Mr. Lee's leadership, "Gilseal News" rose to its present status as a five States publication.

Mr. Lee was always ready to attend and address district meetings, and travelled extensively throughout Victoria for this purpose.

As well as Victorian State President, Mr. Lee was a member of the Federal Council of the Guild.

His other activities included a directorship of Sigma Co. Ltd., and Secretary-Treasurer of the Properties Corporation of the Churches of Christ, and Federal President of the Christian Men's Society.



The late Mr. F. N. Lee

In addition to all these activities, Mr. Lee conducted, in partnership with his son, a busy pharmacy in St. George's road, Thornbury.

His cheerfulness, energy and ability will be sadly missed, and his loyalty and service to the Guild and his profession stand as a shining example which all could strive to emulate.

The following tributes are made by the Guild Federal President, the Federal Public Relations Director, the Chairman of District No. 5, which Mr. Lee represented on the State Branch Committee, and a director of Sigma Co. Ltd.

VALE FRED LEE

Victorian Pharmacy—in fact, all pharmacy—has suffered a tragic loss by his death. His immense vitality, ceaseless energy and alert mind were eagerly given to the improvement of his chosen profession.

He never spared himself in his devotion to the cause of Pharmacy, and his approach to any subject was always positive.

While some of us violently disagreed with him at times because of his virile approach to a subject and

relentless attacking methods, the disagreements were never personal.

He was a lovable chap, warm and responsive, and it will be some time before we adjust ourselves to his loss. Personally I have lost a very dear friend, and I feel sure this can be said by most of us who have associated with him over the years.

His death is a challenge to Victorian Pharmacy, and I hope that members will rally to provide a fitting monument to his memory.

ERIC SCOTT,

Federal President, F.P.S. Guild of Australia.

By his ideals and in his diligence Fred Lee strove in his brief course to do his duty in mundane things, and those of the spirit. He worked hard and unceasingly for his family, for his own business, for his profession, for his Guild, and for his Church. From the suddenness of his passing, it was as if he had realised the need to pack all that tremendous effort into a comparatively brief time in order to fulfil his own exacting schedule and stern sense of duty. The great Cecil Rhodes, though he worked ten times as hard as the average man, could only say as death claimed him at the early age of 49, "So much to do, so little done!"

To those of us who had worked closely alongside Fred Lee, the break comes as a sharp, tragic personal loss. How often have I been with Eric Scott, Fred Lee and their counterparts in other States, in the rough-and-tumble of the political arena into which we have been forced to defend and strengthen the Guild. And how often have I seen Fred draw, as others in official pharmacy are drawing, upon scant reserves of energy in a fight in which no quarter is given and only the few know the weight of the contribution given by these Guild leaders!

Restless, creative, indomitable, willing, loyal and able—Fred was a dynamic figure; and we know now that he did not count the cost. His life and work are an inspiration to us all, and the Guild the richer for his time among us.

KEITH ATTIWILL,

Federal Director of Public Relations.

Members of No. 5 District were saddened and shocked by the news of the untimely death of one who seemed so active, so full of life, whose ready smile and twinkling eye encouraged friendship and infused enthusiasm into those who tackled a problem with him.

We of No. 5 District were tremendously proud of Fred Lee, who first entered official Guild circles to represent the Northcote, Heidelberg, Preston areas as our Delegate to the State Branch Committee. His work for Pharmacy is known all over Australia.

Injustice rankled and roused him to fight tooth and nail to defeat it; his fighting spirit and debating ability his main weapons.

Not only in Pharmacy was he widely known, but also in the brotherhood of the Church of Christ, with whom he served to spread God's Word.

Fred Lee was a fighting man, who passed from this world, undefeated in spirit, mourned by a loving and understanding wife and family and a large circle of friends.

His passing leaves a gap which cannot easily be filled. The amount of work, effort and enthusiasm he brought to Pharmacy's problems will be sadly missed. It would be a fitting tribute to his memory to see others, particularly the younger graduates in Pharmacy, come forward to assist in the furtherance of the high ideals he cherished in the profession for which he gave so much.

J. F. OATEN,

Chairman, No. 5 District.

We who have been associated with the late Frederick Norman Lee as colleagues in official Pharmacy during

(No. 2)

VITAMIN E IN MEDICINE

STONE S. Evaluation of vitamin E therapy in psychiatric disorders. *Diseases Nervous System* II, 355-61 (1950).

The 2800 cases treated with vitamin E included hospitalised psychotic patients and patients with epilepsy and office patients seen in the course of practice of neuropsychiatry. The dose of tocopherol given daily for long periods was 25 to 150 mg. The response to vitamin E treatment was almost invariably good. Patients became less easily fatigued, less irritable, had less indigestion, showed increased resistance to minor infections, and had a greatly improved sense of well-being. Discontinuation of treatment allowed a let-down and relapse in about 7 to 10 days. Associated side effects of interest were restoration of hair texture to normal, lesser incidence of greying of hair, and improvement of hypogenitalism.

Tocopherol administration was also of supplemental value in the treatment of menopausal tension and depressive states, involuntional melancholia and manic depressive cases, schizophrenics, arteriosclerotic senile patients, psychomotor epileptics, patients with migraine headaches, patients with dysmenorrhea, and alcoholics.

BOYD A.M., RATCLIFFE A.H., JEPSON R.P., and JAMES G.W.H. Intermittent claudication. A clinical study. *J. Bone and Joint Surg.* 31B, 325-55 (1949).

Obliterative arterial disease is classified into three groups: primary thrombosis of the popliteal artery, juvenile obliterative arteritis (Buerger's disease), and senile obliterative arteritis. Various methods of treatment are discussed, and the need is emphasised for evaluating results in terms of relative severity or clinical type of the disease. Type 1 represents the condition in which blood supply and muscular demand are very nearly equal; Type 2, in which this equilibrium is attained only above the threshold for pain reaction, and activity is stopped by persistence of pain; and Type 3 in which the equilibrium cannot be reached because of unbearable pain.

Tocopherol, 400 mg. daily, is the only substance that has given consistently good results in cases other than Type 1. Of 72 patients classified as Type 2, 27 were completely relieved and 32 were markedly improved. The consistency with which there was a lag period of four to six weeks before improvement was most striking. After a few months of treatment there was obvious improvement in the appearance of the feet of the patients.

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VICTORIA—Continued

the past fourteen years have been fortunate, indeed . . . his eloquence inspired us, his boundless energy stimulated us, we have been uplifted by his Christian tolerance and softened by his smile, we are deeply grateful for his unselfish service to the welfare of the profession. "He will live in our hearts."

VALE AMICUS, IN MANI DEO.

E. C. McCLELLAND,
Director, Sigma Co. Ltd.

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of Victoria met at 360 Swanston Street, Melbourne, on February 13, at 10 a.m.

Present.—Mr. W. R. Iliffe (President), Messrs. S. J. Baird, H. A. Braithwaite, A. W. Callister, N. C. Manning, A. W. McGibbony, W. Wishart, F. C. Kent (Secretary), T. G. Allen (Minutes Secretary) and R. H. Borowski.

Election of President.—After the minutes had been confirmed, Mr. Iliffe intimated that his term of office as President had expired. Before leaving the chair he wished to express his thanks to his fellow members of the Board for their co-operation. Without that the job would have been very much more difficult, he said. He wished also to record his thanks to the Registrar and staff for their assistance and the cheerful manner in which they had carried out their duties.

The Registrar then took the chair and called for nomination for the office of President for the ensuing year.

Mr. Braithwaite nominated Mr. W. R. Iliffe for a further term of office. He said it was the unanimous wish of the members that Mr. Iliffe should continue for another year the good work he had done in the past year. Mr. Iliffe, he said, had completely justified the confidence the members had shown in him when they elected him 12 months ago. The nomination was seconded by Mr. Callister and carried unanimously.

Formally conveying to Mr. Iliffe that he had been re-elected for a further 12 months, the Registrar said he wished to thank Mr. Iliffe for his kind remarks in regard to the staff and to say that the whole of the staff had enjoyed the experience.

Mr. Iliffe resumed the chair and thanked the members for re-electing him.

Hon. Treasurer.—Mr. W. Wishart was unanimously re-elected Hon. Treasurer for the ensuing year.

Death of Mr. H. D. Fitch.—Mr. Braithwaite said it was his sad duty to draw the attention of the Board to the death of Mr. H. D. Fitch, of Perth, the Deputy President of the Pharmaceutical Association of Australia. He said Mr. Fitch was a man greatly admired throughout the Commonwealth for his wonderful work and sterling character. The members stood in silence for a period, and as a mark of respect to the memory of their late friend and colleague.

Correspondence.—Correspondence was submitted to the Board and dealt with.

Formal Business.—The following formal business was transacted:

Applications for Registration.—David Bruce Raiton, John Robinson Fisher, Nena Mary Winch, and John Denis Duffus (Final Exam. Vic.); and Robert Christopher Carpenter (ex Great Britain); Jack Moran (ex Queensland), Herbert Longden (ex W.A.) and Betty Lilian Newton (ex W.A.) were registered.

Restoration of Names to Register.—Colin Campbell Davies and Vincent Gregory Fox.

Erasure of Names from Register.—The names of Charles Douglas Atkinson, Allan Clifford Saunders, Archibald Coutts Forbes, Herbert William Jones, Fred-

erick Norman Lee, Andrew Ross Cameron, all deceased, were erased from the Register.

The name of Edwin John Dawes, of 334 Nepean Highway, Brighton, was erased by resolution of the Board after enquiry under Section 89, Medical Act 1928, on January 9, 1957.

Managers and Relievers Notified.—94.

Business Changes Notified.—3.

New Businesses Opened.—10.

Apprenticeship Indentures Transferred.—4.

Apprenticeship Indentures Suspended.—7.

Entries February Final Examination.—4.

Certificates of Identity Issued.—15.

Opium Permits Issued.—9.

Permits to Purchase Cyanide Issued.—1.

Licences as General Dealers in Poisons Issued.—4.

Licences to Sell Poisonous Substances Issued.—20.

Licences for Hospitals to Possess Dangerous Drugs.

—27.

Police Reports re Poisonings.—Arsenic 4 (fatal), Phosphorus 1 (fatal), P.M.A.S. Organic Mercury 1 (not fatal), Mysoline and Dilantin 1 (not fatal).

Inspectors' Reports.—Mr. Borowski presented a summary of reports submitted by Inspectors Ahern and Plummer for the month. These were confirmed by the Board and certain action decided upon.

In two instances chemists were to be called for interview with the President concerning failure to carry out the requirements of the regulations fully.

In one instance a prosecution was authorised subject to confirmation from the Board's legal advisers that the evidence submitted was suitable.

Apprenticeship and Curriculum.—The President submitted a brief report of the Conference which had taken place between the Board and representatives of the Council of the Pharmaceutical Society of Victoria. He said two sub-committees had been appointed to consider certain suggestions which had come from this meeting and which he outlined. Further meetings will be held and it was proposed to arrange at an early date for a meeting of Board, Guild and Society to discuss the whole question.

This report was received.

Specified Drugs Regulations.—Mr. Braithwaite presented a report of a discussion during the month with representatives of wholesale druggists and ethical manufacturers.

Various aspects of the proposals of revision of the Specified Drugs Regulations were discussed.

The general principles were outlined to the wholesalers and manufacturers, particular attention being devoted to the matter of distribution and carrying of samples.

Opposition was raised to some of the Board's proposals and the manufacturers and wholesale representatives intimated that these matters will be considered by their section of the Chamber of Manufactures and their views conveyed to the Board in writing.

Mr. Braithwaite said he had undertaken on behalf of the Board that these would receive consideration.

The report was received.

Selection 1957.—Mr. Braithwaite submitted a brief report on the selection of students for 1957. He said 150 applicants had been selected, including seven eastern students.

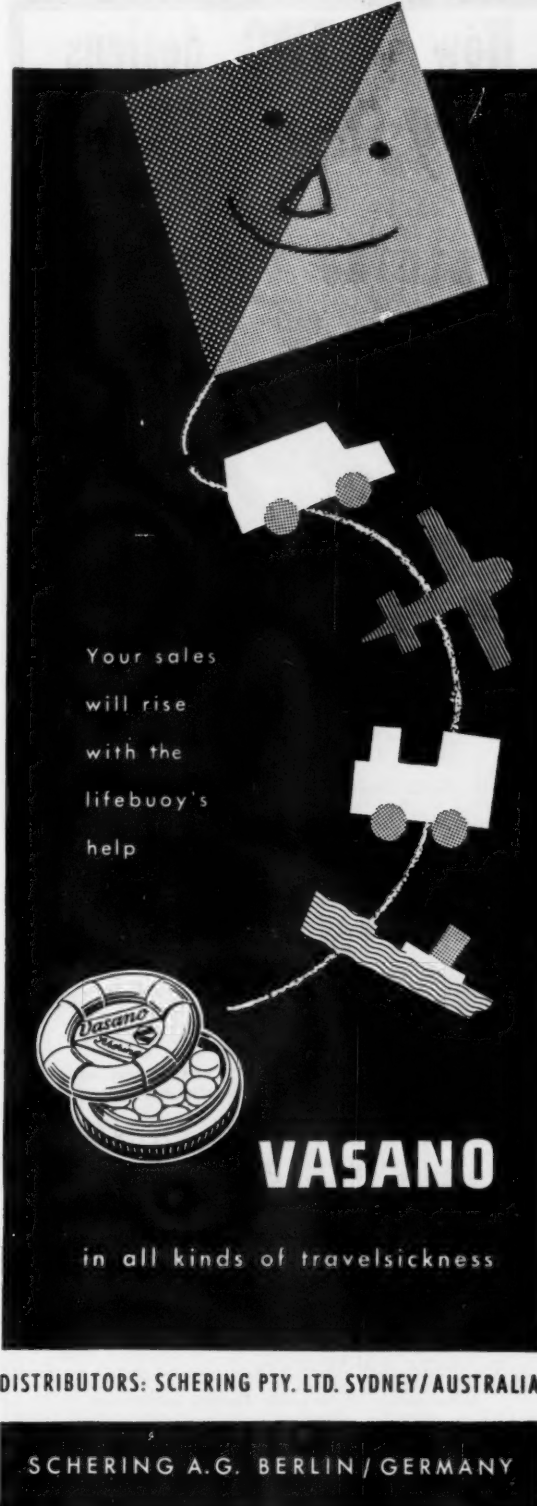
Partial Passes Final Examination.—A memo from Mr. A. T. S. Sissons was received. This suggested that consideration be given to amending the regulations relating to partial passes at the Final Examination.

After consideration it was resolved that with a minor exception the recommendations be adopted.

Poisons Schedules.—The Registrar reported that the Board's recommendation regarding the scheduling of teething powders containing Calomel had been gazetted during the month.

Financial.—The Hon. Treasurer submitted the financial statement and accounts were passed for payment.

The meeting then adjourned.



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VICTORIA—Continued

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of Victoria met at 360 Swanston street, Melbourne, on February 6, at 9.30 a.m.

Present.—Mr. E. Scott (President) in the chair, M.s. P. A. Crawford, Messrs. S. J. Baird, F. W. Johnson, A. G. Davis, L. Long, V. G. Morieson, J. R. Oxley, C. P. A. Taylor, G. H. Williams, F. C. Kent (Secretary), and Mr. R. H. Borowski.

Death of Mr. F. N. Lee and Mr. H. D. Fitch.—At the request of the President, members of the Council stood in silence for a period as a mark of respect to Mr. H. D. Fitch, Deputy President of the Pharmaceutical Association of Australia, and Mr. F. N. Lee, President of the Victorian Branch of the Pharmaceutical Service Guild, both of whom had died since the last meeting of the Council. At a later stage in the meeting Mr. Johnson referred to the passing of these two men. He suggested that appropriate letters of sympathy be forwarded.

The President said he had written to Mrs. Lee, and the Council was represented at the funeral. A telegram had been sent to Mrs. Fitch, but he would write personally, conveying his own sympathy and the sympathy of the members of the Council.

Student Congress.—Mr. F. W. Johnson, Vice-President, reported that at the request of the President he represented the Society at a visit to the Student Congress, held at Kinglake in January. The Dean of the College and the Secretary also attended. He was very much impressed with the type of student representative, and felt that their main purpose in gathering together was to consider the betterment of pharmacy and improvement of the conditions of training. A great number of resolutions were handled by Congress and would be embodied in a report. Among the discussions was one to change the name of the Federal student body from "The National Union of Pharmaceutical Students of Australia" to "The National Association of Pharmaceutical Students of Australia." In some quarters it had been suggested that the word "union" was undesirable.

The President thanked Mr. Johnson for his report and for representing the Society.

Correspondence.—Formal correspondence was tabled, together with the following precis, copies of which had been circulated to Council members:—

To Mrs. A. C. Saunders, extending sympathy of Council on death of her husband.

To Mr. B. G. Fegent, extending sympathy of Council on death of his father.

To Mr. A. K. Lloyd, Geelong, extending congratulations on his appointment as a justice of the peace.

To and from Dr. Arthur Osol, with reference to training at Philadelphia College of Pharmacy in handling of radioisotopes.

To Pharmaceutical Society of Great Britain, forwarding letters of introduction on behalf of Messrs. G. E. A. Taylor and N. J. H. Wardle and Miss Ruth Bull.

To a member forwarding information requested on wholesalers in New Zealand and Fiji and on reciprocal arrangements.

To John Grimwade, Esq.; J. H. McRoberts, Esq.; N. C. Manning, Esq.; Sigma Co. Ltd., E. A. O. Moore, Esq.; R. R. Cochran, Esq.; W. Ramsay (Surgical) Ltd.; S. J. A. Fripp, Esq.; K. I. J. Hodgson, Esq., conveying thanks for donations for prizes.

To Victorian Branch of the Federated Pharmaceutical Service Guild, conveying thanks for cheque in payment of Scott-McGibbony Scholarship.

To Prof. F. Shaw, Department of Physiology, University of Melbourne, forwarding cheque and expressing Council's appreciation of services rendered.

To Mr. A. W. McGibbony, extending congratulations on receipt of the O.B.E. in the New Year Honours List.

To and from Superintendent of Telephones with reference to installation of telephones to members' premises.

To Cowper, Murphy and Associates re sealing of drains at Parkville property.

From Secretary, V.P.S.A., thanking Council for interest shown in N.U.P.S.A. Congress delegates.

To Mr. A. T. S. Sissons with reference to results being forwarded to Commonwealth Scholarship Branch.

From Public Relations Secretariat, forwarding copy of report by Mr. Smith (J. & J.) to American Drug Manufacturers' Association.

From Public Relations Secretariat re Tasmanian Court's proposal to establish a fair trade commission.

From Mr. R. Leeth, advising his intention of proceeding to a medical course at the University of Melbourne. Information regarding concessions to qualified pharmaceutical chemists was forwarded by the Secretary.

To the Chief Librarian, Public Library of Victoria, requesting that the Society be listed as an approved institution for borrowing reference books.

From the Pharmacy Board of Victoria, requesting the Council to nominate representatives to a meeting to discuss the question of poor results at examinations, curriculum, apprenticeship, etc. The President said, together with the Vice-President, Mr. Williams, Mr. Long and Mr. Davis, he would attend this meeting. At the request of the Board, the Dean of the College and Mr. A. J. Cobcroft would also be present.

From a member, expressing appreciation of the issue of Monthly Bulletins to chemists and submitting suggestions re type of matter to be included.

Hon. Librarian's Report.—It was resolved, on the recommendation of the Hon. Librarian, that the following new books be purchased for the Society's Library:—

Organic Chemistry: New Third Edition, by Louis F. Fieser and Mary Fieser. Reinhold Publishing Co., New York, U.S.A.

Sodium: Its Manufacture, Properties and Uses, by Marshall Sittig (A.C.S. Monograph 133). Reinhold Publishing Co., New York, U.S.A.

Semi-Micro Organic Preparations: By J. H. Wilkinson, B.Sc. Oliver & Boyd.

Organic Chemistry: Electronic Theory and Reaction Mechanism, by R. I. Reed and Horwood Tucker. London, Macmillan Books.

Council Elections.—The President reminded members that nominations for the election of members of the Council would close at 4 p.m. on February 11. One nomination had been received to date for the extraordinary election and four nominations for the four vacancies at the ordinary election. Three other nomination forms had been requested, and it seemed certain that there would be a contested election.

The arrangements were noted.

Fellowship Examinations: A memorandum was received from the Dean of the College, advising that the following four members were successful at the Fellowship Examinations and were now eligible for election as Fellows of the Society by examination:—Mr. A. I. K. Lloyd, Miss H. Aberdeen, Miss J. Fraser and Mr. R. T. Hawksley.

New Members Elected.—

Full Members: Richard Douglas Bruce, Dorothy Joan England, Royce Reginald Pepin, Graeme Alexander Smith.

Transfer from Apprentice Membership to Full Membership: Peter Grant Ball, Raymond William Barry, Leslie Cushman Bigelow, Barrie H. B. Gerrard, John Robinson Fisher, Kenneth Lyons, Mary J. McNamara,

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VICTORIA—Continued

James Alfred Mitchell, Janice Wilma Reader, Donald Wearne Roberts, James Henry Snow, Francis Richard Taylor.

Apprentice Member: Donald H. Shelden.

Fellows (by Examination): Robert Terence Hawksley and Alistair Ian Kingswell Lloyd.

College Opening.—The President reported that the Premier, the Hon. H. E. Bolte, had accepted the invitation of the Council to deliver the inaugural address and distribute prizes at the official opening of the 1957 session of the College of Pharmacy.

Invitation cards had been printed and were being distributed. Lectures for third and fourth year classes would commence a week earlier (Wednesday, February 13).

Interview with Premier.—At the request of the President, Mr. Taylor gave a brief report of an interview which the President and he had during the month with the Premier concerning the new College building. They had been well received by the Premier, to whom they outlined briefly the position. The Premier was not acquainted with all of the details, and called in to the interview the Accountant to the Treasury, Mr. T. Forrestal. Mr. Forrestal had informed the Premier in their presence that the Government was committed by the decision of an earlier Government to advance the sum of £300,000 in accordance with the terms and conditions of the agreement which had been entered into with the Society. At the suggestion of the Premier, the Council would now make a formal request that provision be made in the estimates for the coming year for a sum of money, estimated by the architects, to be required in the coming twelve months.

Civil Defence School.—The President reported that the Council had been advised that provision had been made for a nominee of the Society to attend the Indoctrination Course of the Civil Defence School, Mount Macedon, from February 10 to February 14. They had been advised that the vacancy was made available following representations made for the admission of Mr. Alistair I. K. Lloyd, who would be leaving Melbourne on February 27 to take up a project in relation to pharmaceutical participation in Civil Defence under the terms of the Kodak Travelling Scholarship No. 3.

The notice was short, and the Executive had submitted the name of Mr. Lloyd for this course. This action was confirmed by the Council.

The President said that the assurance given at the request of the Council for representation at the next medical course at the Macedon School held good.

Class Lists, 1956.—The President reported that early in January class lists for 1956 were received from the Lectorial Board. These related to First Year Correspondence Course and lectures and Second Year Correspondence Course and lectures. The lists included names of students who had received certificates for each of these courses.

Recommendations were made regarding students who were partially successful in first and second year courses, that they be permitted to proceed.

It was recommended that a number of students should repeat the full courses, and all of these recommendations were adopted by the executive and the students notified accordingly.

The Lectorial Board had recommended in addition that the courses of a number of students who had done very badly should be terminated. The President said that he and the Vice-President had examined the reports of each of these students very closely. Where sons or daughters of chemists were concerned, the parents had been interviewed.

He and Mr. Johnson had been enabled to get a deeper insight and background information concerning each of the students involved, and a number of them had

been requested to attend for personal interview. The results of the interviews and the recommendations which followed were given to the Council and the action of the President confirmed.

Annual Meeting.—Resolved that the next Annual Meeting be held on Monday, March 25, at 8 p.m., and that arrangements, including choice of a guest speaker, be left to the Executive.

Selection.—Mr. Davis submitted a brief progress report on the selection of students for 1957. He expressed the opinion that the standard of qualification was lower than in previous years. Nearly 400 applications were received and over 230 applicants had been interviewed. The final selection would not be ready to submit to the Council before several days.

The report was supplemented by Mr. Oxley, who had attended the Selection Committee as an observer and had become very interested. The general average of the applicants was in his opinion good, and there was a number of outstanding candidates.

Recognition of Services of Mr. C. P. A. Taylor.—Mr. Oxley drew attention to the fact that Mr. Taylor has been a member of the Council for over 25 years, and was therefore the "father" of the Council, which he thought should be recognised in some way. The President said he agreed, and that consideration would be given to the suggestion.

Night Meetings of Council.—The President expressed the opinion that consideration should be given to the question of holding meetings of the Council at night. He thought that if this were done there was a probability of attracting more young candidates for election when vacancies occurred in the Council or when the ordinary elections were conducted.

It was agreed that this matter should be the subject of discussion at a later meeting.

Financial.—The Hon. Treasurer submitted the monthly financial statement, which showed a credit balance of £3105/8/4. Accounts were passed for payment and the meeting adjourned.

THE P.D.L.

Directors' Meeting

The 388th meeting of the Directors of Pharmaceutical Defence Ltd. was held at 18-22 St. Francis street, Melbourne, on February 20, at 10 a.m.

Present.—At the opening of the meeting there were present Messrs. I. H. Barnes, F. N. Pleasance, J. W. Pollock, C. C. Wallis and the Secretary. Messrs. E. W. Braithwaite, N. C. Cossar and E. A. O. Moore were delayed by their attendance at the official opening of the 1957 Session of the Victorian College of Pharmacy by the Premier (Hon. H. E. Bolte). Mr. C. C. Wallis occupied the chair pending the arrival of Mr. Braithwaite.

Correspondence.—Formal correspondence was tabled, and the following were amongst the letters dealt with:

To Mr. F. N. Pleasance and Mr. B. L. Warner, conveying messages of sympathy from the annual meeting. A letter of thanks had been received from Mr. Warner, who stated that he had recovered from his operation.

From Mr. K. E. Hartley, of Warragul, advising that he had taken his wife into partnership and seeking advice on certain legal requirements. Letter of thanks received for the assistance given.

Minutes of the annual meeting of the Queensland Branch, held on December 6, 1956, were read. At a subsequent meeting of the Local Board Mr. C. W. Noble was re-elected as Chairman, Mr. L. Hall as Treasurer, and Mr. W. A. Lenehan as delegate to the Federal Council of P.D.L.

From the South Australian Branch Secretary, advising that Mr. D. Finlayson is again Chairman of the

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VICTORIA—Continued

South Australian Local Board, the other members being Messrs. James Ernest Suck and Albert Gordon Lean.

From the Western Australian Branch Secretary, forwarding minutes of the annual meeting of the Branch held on December 7, 1956, when the retiring members of the Local Board were re-elected. On February 6 a telegram was received from Mr. F. W. Avenell, advising that Mr. H. D. Fitch had died on February 5 after a serious illness. Mr. Avenell later reported that a meeting of the Local Board had been held on February 15, when Mr. Robert William Charles Dalby, of Oxford street, Leederville, had been appointed to take the place of the late Mr. H. D. Fitch as a member of the W.A. Local Board. Mr. R. I. Cohen had been elected as Chairman and as the W.A. representative on the Federal Council of P.D.L., and Mr. A. A. Baxter had been elected as Treasurer of the Branch. The Chairman said the death of Mr. Fitch was greatly regretted by all. A telegram of sympathy had been forwarded to Mrs. Fitch.

New Members Elected.—Messrs. R. S. Anderson, Prahran; J. E. Bullock, Beulah; A. A. Cooper, Cobden; K. J. Couchman, North Sunshine; N. G. Davies, Oak Park; J. D. Davis, Thornbury; S. Gandolfo, Black Rock; J. C. Harlamb, Melbourne; Mrs. N. N. Hartley, Warragul; Messrs. K. Lyons, Brighton East; J. G. Manning, Highett; A. G. R. Marshall, West Rosebud; J. Moran, West Footscray; Miss A. E. Steinberg, Carlton; Messrs. F. R. Taylor, Ballarat; C. Victor, East Brunswick; and H. J. Wake, East Sunshine.

Messrs. A. Fennell, Moonah (Tas.), J. R. Prowse, New Norfolk (Tas.), G. W. Wells, Smithton (Tas.), F. M. Williams, Ulverstone (Tas.), and B. H. Wragg, Smithton (Tas.), were also elected at this meeting.

Legal Advice.—A suburban member reported that a movie camera worth £49 had been stolen from his pharmacy by a shoplifter and sold to a secondhand camera dealer in the city. The member, acting on a "hunch," found the camera, which the dealer still held. He asked for advice on the course he should take to recover his property. The solicitor advised that the member was entitled to recover his property. He should report the circumstances to the police, informing them that the camera was at present held by a secondhand dealer. If the dealer refused to hand over the camera, it might be necessary for the member to take proceedings to recover his property.

A member reported some trouble arising from advertising space sold to him some months ago in a magazine to be distributed in his locality (this condition appeared not to have been carried out). The solicitor communicated with the solicitors acting for the publishers, and came to an arrangement whereby a cheque for a reduced sum would be accepted in full settlement.

Claims.—A claim that arose and had been settled since the November meeting developed from a misunderstanding by an apprentice of the employer's instructions conveyed by telephone for extemporaneous relief of an interstate visitor passing through the town.

Another incident brought to notice suggested that, notwithstanding several circular communications on the subject, not all members are aware that the regular chemists' indemnity insurance does not extend to cover accidents (such as a fall) to customers whilst in the pharmacy. This risk should be covered separately by a General Public Risk (Premises) policy.

Assistance to Widows.—The Secretary tabled copies of the circular printed in two colours and dated January 17, 1957, which had been sent in duplicate to all members in Victoria. Copies had also been sent to the Branch Secretaries in three States which had accepted the offer of copies.

It was reported that since the last meeting the available information, coupled with a message of sympathy, had been forwarded to the widows of two former mem-

bers, namely, Mrs. A. C. Saunders and Mrs. F. N. Lee.

Death of Mr. F. N. Lee.—Referring to the death of Mr. F. N. Lee, President of the Victorian Branch of the Guild, on January 26, the Chairman said Mr. Moore, the Secretary, and he were amongst the large gathering at the church service on the day of the funeral. Apart from the Secretary's letter to Mrs. Lee, it was agreed it would be fitting that a further letter, expressing the sympathy of the Directors, should be sent from this meeting.

Financial.—The Hon. Treasurer presented the monthly financial statement, and accounts totalling £1019/17/9 were passed for payment.

On the suggestion of Mr. Pleasance following his relinquishing of the office of Hon. Treasurer after 20 years, it was agreed that the new Hon. Treasurer (Mr. N. C. Cossar) and the Secretary should call at the offices of the banks and the Inscribed Stock Registry to personally verify the balances and securities held as shown in the balance-sheet.

The meeting closed at 12.30 p.m.

BOTTLE JAW IS A GUIDE TO FLUKE

Many cases of chronic fluke disease have been seen in sheep flocks in Northern Victoria this month, reports Mr. R. V. Dunlop, stock inspector of the Victorian Department of Agriculture. These cases are not surprising in view of the continuous trouble many sheep owners experienced with acute fluke last winter and spring. The young fluke have now matured in the livers of the sheep, and have reached the stage where they could cause considerable sheep losses during the autumn.

The first signs to look for, advises Mr. Dunlop, are anaemia with loss of condition. A soft swelling under the jaw known as bottle jaw is sometimes seen. Anaemia is indicated by paleness of the mucous membranes of the eyes and lining of the mouth.

On properties where fluke losses have occurred previously treatment should be given now. It consists of drenching all sheep with a mixture of 1 c.c. carbon tetrachloride in 4 c.c. of liquid paraffin. A drench now should ensure that ewes go into the lambing season without the extra handicap of carrying a burden of liver fluke.

—Extract from Bulletin No. 652, Department of Agriculture, Victoria, dated 19/2/1957.

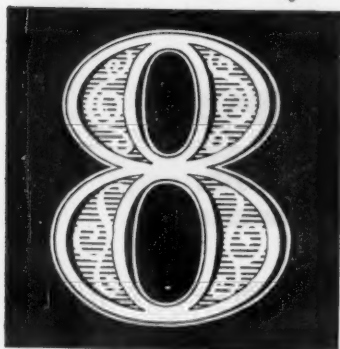
LATE CALVES CONTRACT PNEUMONIA

Outbreaks of calf pneumonia are occurring among late calves in several districts. Mr. D. McQueen, veterinary officer of the Victorian Department of Agriculture at Warragul, states that early recognition of this condition is important in stopping the spread of infection to other healthy calves and in saving by treatment those already affected.

Calves with pneumonia run a high temperature, are listless, and lie about panting. They will not feed, fall away rapidly in condition, and have a soft cough. There is frequently a discharge from the nostrils.

To avoid confusion with pleuro-pneumonia, veterinary advice should be sought in these cases. Affected calves should be isolated and given good shelter. Treatment is by antibiotics, such as sulphadimadine or penicillin, and should be undertaken only with veterinary advice. In calves recovering from the disease, provision of green feed or a dose of Vitamin A supplement, together with treatment for hair worms, will help them on the road to recovery.

—Extract from Bulletin No. 652, Department of Agriculture, Victoria, dated 19/2/1957.



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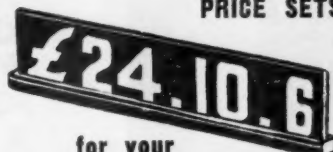
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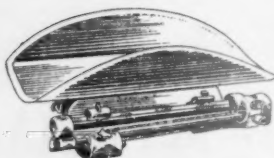
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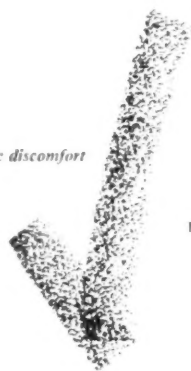


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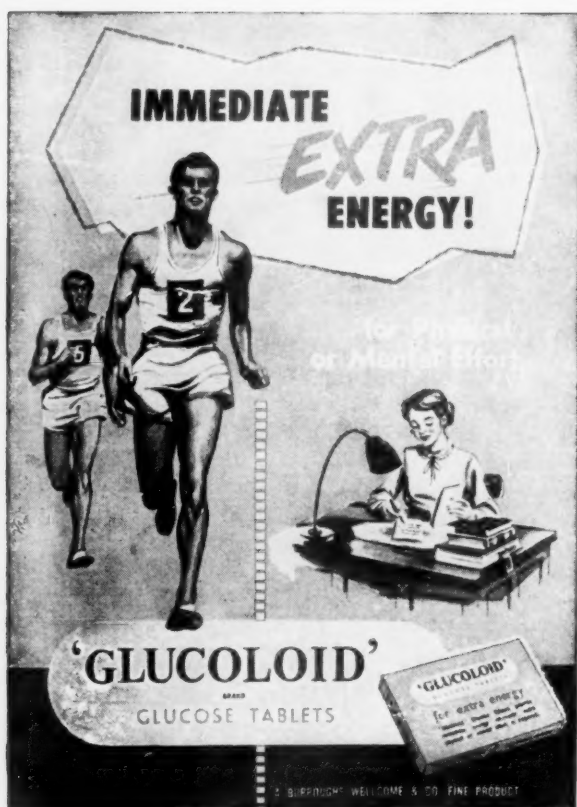
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